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1840.

48.

THE

MATERNAL MANAGEMENT

OF

CHILDREN,

IN HEALTH AND DISEASE.

BY

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PREFACE.

THIS little book has been written for the young and inexperienced mother. It is intended to furnish her with that information which the experience and observation of some years convince the author, young mothers, almost without any exception, do not possess; and yet, from ignorance of which, the constitution of many an infant has received irretrievable injury, and life itself but too frequently fallen a sacrifice.

In the first chapters, devoted to the general management of the child in health, the author has endeavoured to teach the young mother, that *the prevention of disease is her province, not*

its cure; that to this object all her best efforts must be directed; and, moreover, that to tamper with medicine, when disease has actually commenced, is to hazard the life of her offspring.

In the fourth chapter it has been attempted to point out, how the first symptoms of disease may be early detected by the parent. The subject has been felt to be a difficult one, and to give particular directions quite out of the question; but it is hoped that the suggestions thrown out will, in some measure, answer the purpose intended. On the advantage of an early and prompt application of remedies in the diseases of childhood, generally so active in their progress and severe in their character, it is unnecessary to offer any observation.

The latter part of the work, consisting of the maternal management of disease, the author regards as a subject of high and serious moment. Small as is the attention which has been hitherto paid to it, yet, in the diseases

of infancy and childhood, how invaluable is a careful and judicious maternal superintendence to give effect to the measures prescribed by the physician.

The author has endeavoured to arrange the contents of the work in a manner which shall be most easily understood and readily available; and he now publishes it with the desire to supply, in some degree, a deficiency in this important department of knowledge.

Finsbury Place, June, 1840.

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THE

MATERNAL MANAGEMENT

OF

CHILDREN.

CHAPTER I.

ON THE GENERAL MANAGEMENT OF INFANCY AND CHILDHOOD.

THE line of demarcation made between infancy and childhood, both by ancient and modern writers, has always been arbitrary. I would draw the line between the two, at a period of time which appears to me to be the most natural, the most simple, and least likely to lead the reader into the danger of misapplying any part of the practical directions of this, or any future chapter of the work. We will consider, then, that —

INFANCY, commencing with birth, extends to

about the end of the second year, when the *first* dentition is completed.

CHILDHOOD extends from about the second, to the seventh or eighth year, when the *second* dentition is commenced.

SECT. I. — DIETETICS OF INFANCY.

IN the early months of infancy the organs of digestion are unsuited to any other food than that derived from the breast of the mother. So little capable are they, indeed, to digest any other, even of the blandest and most digestible kind, that probably not more than one infant in six or seven ever arrives at the more advanced periods of life when deprived of the kind of nourishment nature intended for this epoch.

It is not every parent, however, who is able to become a nurse; and with many this office would not only be highly injurious to their own health, but materially so to that of their offspring. This may arise from various causes, hereafter to be noticed, but whenever they exist a wet-nurse is demanded.

Again, the latter resource is not always attainable, so that the hazardous experiment of an artificial diet, or bringing up by hand, as it is then termed, is obliged to be resorted to.

Thus, infantile dietetics naturally divides itself into MATERNAL NURSING, WET-NURSE SUCKLING, and ARTIFICIAL FEEDING.

1. MATERNAL NURSING.

Plan of Suckling.

From the first moment the infant is applied to the breast, it must be nursed upon a certain plan. This is necessary to the well-doing of the child, and will contribute essentially to preserve the health of the parent, who will thus be rendered a good nurse, and her duty at the same time will become a pleasure.

This implies, however, a careful attention on the part of the mother to her own health; for that of her child is essentially dependent upon it. Healthy, nourishing, and digestible milk can be procured only from a healthy parent; and it is against common sense to expect that,

if a mother impairs her health and digestion by improper diet, neglect of exercise, and impure air, she can, nevertheless, provide as wholesome and uncontaminated a fluid for her child, as if she were diligently attentive to these important points. Every instance of indisposition in the nurse is liable to affect the infant.

And this leads me to observe, that it is a common mistake to suppose that, because a woman is nursing, she ought therefore to live very fully, and to add an allowance of wine, porter, or other fermented liquor, to her usual diet. The only result of this plan is, to cause an unnatural degree of fulness in the system, which places the nurse on the brink of disease, and which of itself frequently puts a stop to the secretion of the milk, instead of increasing it. The right plan of proceeding is plain enough; only let attention be paid to the ordinary laws of health, and the mother, if she have a sound constitution, will make a better nurse than by any foolish deviation founded on ignorance and caprice.

The following case proves the correctness of this statement: —

A young married lady, confined with her first child, left the lying-in-room at the expiration of the third week, a good nurse, and in perfect health. She had had some slight trouble with her nipples, but this was soon overcome.

The porter system was now commenced, and from a pint to a pint and a half of this beverage was taken in the four and twenty hours. This was resorted to, not because there was any deficiency in the supply of milk, for it was ample, and the infant thriving upon it; but because, having become a nurse, she was told that it was usual and necessary, and that without it her milk and strength would ere long fail.

After this plan had been followed for a few days, the mother became drowsy and disposed to sleep in the daytime; and headach, thirst, a hot skin, in fact, fever supervened; the milk diminished in quantity, and, for the first time, the stomach and bowels of the infant became disordered. The porter was ordered to be left off; remedial measures were prescribed; and all symptoms, both in parent and child, were after a while removed, and health restored.

Having been accustomed, prior to becoming a mother, to take a glass or two of wine, and occasionally a tumbler of table beer, she was advised to follow precisely her former dietetic plan, but with the addition of half a pint of barley-milk morning and night. Both parent and child continued in excellent health during the remaining period of suckling, and the latter did not taste artificial food until the ninth month, the parent's milk being all-sufficient for its wants.

No one can doubt that the porter was in this case the source of the mischief. The patient had gone into the lying-in-room in full health, had had a good time, and came out from her chamber (comparatively) as strong as she entered it. Her constitution had not been previously worn down by repeated child-bearing and nursing, she had an ample supply of milk, and was fully capable, therefore, of performing the duties which now devolved upon her, without resorting to any unusual stimulant or support. Her previous habits were totally at variance with the plan which was adopted; her system became too full, disease was produced,

and the result experienced was nothing more than what might be expected.

The plan to be followed for the first six months. — Until the breast-milk is fully established, which may not be until the second or third day subsequent to delivery (almost invariably so in a first confinement), the infant must be fed upon a little thin gruel, or upon one third water and two thirds milk, sweetened with loaf sugar.

After this time it must obtain its nourishment from the breast alone, and for a week or ten days the appetite of the infant must be the mother's guide, as to the frequency in offering the breast. The stomach at birth is feeble, and as yet unaccustomed to food; its wants, therefore, are easily satisfied, but they are frequently renewed. An interval, however, sufficient for digesting the little swallowed, is obtained before the appetite again revives, and a fresh supply is demanded.

At the expiration of a week or so it is essentially necessary, and with some children this may be done with safety from the first day of

suckling, to nurse the infant at regular intervals of three or four hours, day and night. This allows sufficient time for each meal to be digested, and tends to keep the bowels of the child in order. Such regularity, moreover, will do much to obviate fretfulness, and that constant cry, which seems as if it could be allayed only by constantly putting the child to the breast. A young mother very frequently runs into a serious error in this particular, considering every expression of uneasiness as an indication of appetite, and whenever the infant cries offering it the breast, although ten minutes may not have elapsed since its last meal. This is an injurious and even dangerous practice, for, by overloading the stomach, the food remains undigested, the child's bowels are always out of order, it soon becomes restless and feverish, and is, perhaps, eventually lost; when, by simply attending to the above rules of nursing, the infant might have become healthy and vigorous.

For the same reason, the infant that sleeps with its parent must not be allowed to have the nipple remaining in its mouth all night. If

nursed as suggested, it will be found to awaken, as the hour for its meal approaches, with great regularity. In reference to night-nursing, I would suggest suckling the babe as late as ten o'clock p. m., and not putting it to the breast again until five o'clock the next morning. Many mothers have adopted this hint, with great advantage to their own health, and without the slightest detriment to that of the child. With the latter it soon becomes a habit; to induce it, however, it must be taught early.

The foregoing plan, and without variation, must be pursued to the sixth month.

After the sixth month to the time of weaning. — If the parent has a large supply of good and nourishing milk, and her child is healthy and evidently flourishing upon it, no change in its diet ought to be made. If otherwise, however, (and this will but too frequently be the case, even before the sixth month*,) the child may be fed twice in the course of the day, and that kind of food chosen which, after a little trial, is found to agree best.

Leman's tops and bottoms, steeped in hot

* See Deficiency of Milk, p. 11.

water, with the addition of a little fresh milk, and sweetened or not with loaf sugar, is one of the best description.

If the stomach reject this, farinaceous food boiled in water, and mixed with a small quantity of milk, may be employed. Or weak mutton or veal broth, or beef tea, clear and free from fat, and mixed with an equal quantity of farinaceous food.

If this artificial diet is used before the sixth month, it must be given through the sucking-bottle; after this period with a spoon: in either case it must be previously passed through a sieve.

When the large or grinding teeth have appeared, the same food is still to be continued, but need not any longer be expressed through the sieve.

Such is the plan of nursing to be followed by the mother until she wean her infant altogether from the breast. The period when this ought to take place, as also the manner of accomplishing it, are detailed in the section on "Weaning."*

* See page 51.

The diet from weaning to the termination of infancy is pointed out under "Artificial Feeding."*

Deficiency of Milk.

If this deficiency exist from the earliest weeks after delivery, and it is not quickly remedied by the means presently to be pointed out, a wet-nurse must be obtained. It will be of no avail partially to nurse, and partially to feed the infant at this period and under such circumstances, for if it is not soon lost, it will only live for a few months, or a year at most, and be an object of the greatest anxiety and grief to its parent. This condition arises from the unwholesomeness of the mother's milk, united with the artificial food; for when the milk is deficient from the first, and continues so notwithstanding the means used for its increase, it is invariably unhealthy in its quality.

This deficiency, however, may exist, and even at a very early period after delivery, and yet

* See page 34.

be removed. This, however, is not to be accomplished by the means too frequently resorted to; for it is the custom with many, two or three weeks after their confinement, if the supply of nourishment for the infant is scanty, to partake largely of malt liquor for its increase. Sooner or later this will be found injurious to the constitution of the mother: but how, then, is this deficiency to be obviated? Let the nurse keep but in good health, and this point gained, the milk, both as to quantity and quality, will be as ample, nutritious, and good, as can be produced by the individual.

I would recommend a plain, generous, and nutritious diet; not one description of food exclusively, but, as is natural, a wholesome, mixed, animal, and vegetable diet, with or without wine or malt liquor, according to former habit; and, occasionally, where malt liquor has never been previously taken, a pint of good sound ale may be taken daily with advantage, if it agree with the stomach. Regular exercise in the open air is of the greatest importance, as it has an extraordinary influence in promoting the secretion of healthy milk. Early after leaving

the lying-in room, carriage exercise, where it can be obtained, is to be preferred, to be exchanged, in a week or so, for horse exercise, or the daily walk. The tepid, or cold salt-water shower bath, should be used every morning; but if it cannot be borne, sponging the body with salt-water must be substituted.

By adopting with perseverance the foregoing plan, a breast of milk will be obtained as ample in quantity, and good in quality, as the constitution of the parent can produce, as the following case proves: —

On the 17th September, 1839, I attended a lady twenty-four years of age, a delicate, but healthy woman, in her first confinement. The labour was good. Every thing went on well for the first week, except that, although the breasts became enlarged, and promised a good supply of nourishment for the infant, at its close there was merely a little oozing from the nipple. During the next fortnight a slight, but very gradual increase in quantity took place, so that a dessert spoonful only was obtained about the middle of this period, and perhaps double this quantity at its expiration. In the mean time the child was

necessarily fed upon an artificial diet, and as a consequence its bowels became deranged, and a severe diarrhœa followed. A wet-nurse was advised for the child as the only means of saving its life, and change of air for the mother as the most likely expedient (in connection with the general treatment pointed out above) for obtaining a good breast of milk. Accordingly, on the 5th October, the patient, taking with her the infant and a wet-nurse, went a few miles from town.

For three or four days it was a question whether the little one would live, for so greatly had it been reduced by the looseness of the bowels that it had not strength to grasp the nipple of its nurse; the milk, therefore, was obliged to be drawn, and the child fed with it from a spoon. After the lapse of a few days, however, it could obtain the breast-milk for itself; and, to make short of the case, on the 25th of the same month, the mother and child returned home, the former having a very fair proportion of healthy milk in her bosom, and the child perfectly recovered and evidently thriving fast upon it.

Where, however, there has been an early deficiency in the supply of nourishment, it will most frequently happen that, before the sixth or seventh month, the infant's demands will be greater than the mother can meet. The deficiency must be made up by artificial food, which must be of a kind generally employed before the sixth month, and given through the bottle. If, however, this plan of dieting should disagree, the child must, even at this period, have a wet-nurse.

Women who marry comparatively late in life, and bear children, generally have a deficiency of milk after the second or third month: artificial feeding must in part be here resorted to.

The injurious Effects to the Mother and Infant of undue and protracted Suckling.

Upon the Mother. — The period of suckling is generally one of the most healthy of a woman's life. But there are exceptions to this as a general rule; and nursing, instead of being

accompanied by health, may be the cause of its being materially, and even fatally, impaired. This may arise out of one of two causes, — either, a parent continuing to suckle too long; or, from the original powers or strength not being equal to the continued drain on the system.

Examples of the first class I am meeting with daily. I refer to poor married women, who, having nursed their infants eighteen months, two years, or even longer than this, from the belief that by so doing they will prevent pregnancy, call to consult me with an exhausted frame and disordered general health, arising solely from protracted nursing, pursued from the above mistaken notion.

I most frequently meet with examples of the second class in the delicate woman, who, having had two or three children in quick succession, her health has given way, so that she has all the symptoms arising from undue suckling, when perhaps the infant at her breast is not more than two or three months old.

Since the health of the mother, then, will suffer materially from this circumstance, she

ought not to be ignorant of the fact; so that, when the first symptoms manifest themselves, she may be able to recognise their insidious approach; and tracing them to their real cause, obtain medical advice before her health be seriously impaired.

Symptoms. — The earliest symptom is a dragging sensation in the back when the child is in the act of sucking, and an exhausted feeling of sinking and emptiness at the pit of the stomach afterwards. This is soon followed by loss of appetite, costive bowels, and pain on the left side; then, the head will be more or less affected, sometimes with much throbbing, singing in the ears, and always some degree of giddiness, with great depression of spirits.

Soon the chest becomes affected, and the breathing is short, accompanied by a dry cough and palpitation of the heart upon the slightest exertion. As the disease advances, the countenance becomes very pale, and the flesh wastes, and profuse night perspirations, great debility, swelling of the ankles, and nervousness ensue. It is unnecessary, however, to enter into a more full detail of symptoms.

Treatment. — All that it will be useful to say in reference to treatment, is this; that, although much may be done in the first instance by medicine, change of air, cold and sea bathing, yet the quickest and most effectual remedy is to wean the child, and thus remove the cause.

THE ILL EFFECTS UPON THE INFANT. — There is another and equally powerful reason why the child should be weaned, or rather, have a young and healthy wet-nurse, if practicable. The effects upon the infant, suckled under such circumstances, will be most serious. Born in perfect health, it will now begin to fall off in its appearance, for the mother's milk will be no longer competent to afford it due nourishment; it will be inadequate in quantity and quality. Its countenance, therefore, will become pale; its look sickly and aged; the flesh soft and flabby; the limbs emaciated; the belly, in some cases, large, in others, shrunk; and the evacuations fetid and unnatural; and in a very few weeks, the blooming healthy child will be changed into the pale, sickly, peevish, wasted creature, whose life appears hardly desirable.

The only measure that can save the life, and recover an infant from this state, is that which would previously have prevented it — a healthy wet-nurse.

If the effects upon the infant should not be so aggravated as those just described, and it subsequently live and thrive, there will be a tendency in such a constitution to scrofula and consumption, to manifest itself at some future period of life, undoubtedly acquired from the parent, and dependent upon the impaired state of her health at the time of its suckling. A wet-nurse early resorted to, will prevent this.

It will be naturally asked, for how long a period a mother ought to perform the office of a nurse? No specific time can be mentioned, and the only way in which the question can be met is this: no woman, with advantage to her own health, can suckle her infant beyond twelve or eighteen months; and at various periods between the third and twelfth month, many women will be obliged partially or entirely to resign the office.*

The monthly periods generally reappear from

* See "Weaning," p. 51.

the twelfth to the fourteenth month from delivery; and when established, as the milk is found invariably to diminish in quantity, and also to deteriorate in quality, and the child is but imperfectly nourished, it is positively necessary in such instances at once to wean it.

Of Mothers who ought never to suckle.

There are some females who ought never to undertake the office of suckling, both on account of their own health, and also that of their offspring.

The woman of a consumptive and strumous constitution ought not.— In the infant born of such a parent there will be a constitutional predisposition to the same disease; and, if it is nourished from her system, this hereditary predisposition will be confirmed.

"No fact in medicine is better established than that which proves the hereditary transmission from parents to children of a constitutional liability to pulmonary disease, and especially to consumption; yet no condition is less

attended to in forming matrimonial engagements. The children of scrofulous and consumptive parents are generally precocious, and their minds being early matured, they engage early in the business of life, and often enter the married state before their bodily frame has had time to consolidate. For a few years every thing seems to go on prosperously, and a numerous family gathers around them. All at once, however, even while youth remains, their physical powers begin to give way, and they drop prematurely into the grave, exhausted by consumption, and leaving children behind them, destined, in all probability, either to be cut off as they approach maturity, or to run through the same delusive but fatal career as that of the parents from whom they derived their existence." * There is scarcely an individual who reads these facts, to whom memory will not furnish some sad and mournful example of their truth; though they perhaps may have hitherto been in ignorance of the exciting cause.

It is, however, with the mother as a nurse

* Combe's Principles of Physiology applied to the Preservation of Health, &c.

that I have now to do, and I would earnestly advise every one of a consumptive or strumous habit (and if there is any doubt upon this point, the opinion of a medical adviser will at once decide it) never to suckle her offspring; her constitution renders her unfit for the task. And, however painful it may be to her mind at every confinement to debar herself this delightful duty, she must recollect that it will be far better for her own health, and infinitely more so for that of the child, that she should not even attempt it; that her own health would be injured, and her infant's, sooner or later, destroyed by it.

The infant of a consumptive parent, however, must not be brought up by hand. It must have a young, healthy, and vigorous wet-nurse; and in selecting a woman for this important duty very great care must be observed.* The child should be nursed until it is twelve or fifteen months old. In some cases it will be right to continue it until the first set of teeth have appeared, when it will be desirable that a fresh wet-nurse should be obtained for the last six

* See "Choice of a Wet-nurse," p. 28.

months.* If the child is partially fed during the latter months (from necessity or any other cause), the food should be of the lightest quality, and constitute but a small proportion of its nutriment.

But not only must the nourishment of such a child be regarded, but the *air* it breathes, and the *exercise* that is given to it; as also, the careful removal of all functional derangements as they occur, by a timely application to the medical attendant, and maintaining, especially, a healthy condition of the digestive organs. All these points must be strictly followed out, if any good is to be effected.

By a rigid attention to these measures the mother adopts the surest antidote, indirectly, to overcome the constitutional predisposition to that disease, the seeds of which, if not inherited from the parent, are but too frequently developed in the infant during the period of nursing; and, at the same time, she takes the best means to engender a sound and healthy constitution in her child. This, surely, is worth any sacrifice.

* One that has been confined about six weeks or two months.

If the infant derives the disposition to a strumous constitution entirely from the father, and the mother's health be unexceptionable, then I would strongly advise her to suckle her own child.

The mother of a highly susceptible nervous temperament ought not.—There are other women who ought never to become nurses. The mother of a highly nervous temperament, who is alarmed at any accidental change she may happen to notice in her infant's countenance, — who is excited and agitated by the ordinary occurrences of the day;—such a parent will do her offspring more harm than good by attempting to suckle it. Her milk will be totally unfit for its nourishment: at one time it will be deficient in quantity,—at another, so depraved in its quality, that serious disturbance to the infant's health will ensue. The young and inexperienced mother, who is a parent for the first time, and altogether ignorant of the duties of her office, and at the same time most anxious to fulfil them faithfully, is but too frequently an instance in point; although at a future period she will generally make a good nurse. The following is an illustration: —

In December, 1838, I attended a young married lady in her first confinement, and in excellent health. She gave birth to a fine, plump, healthy boy. Every thing went on well for three weeks, the mother having an abundant supply of milk, and the infant evidently thriving upon it. About this time, however, the child had frequent fits of crying; the bowels became obstinately costive; — the motions being lumpy, of a mixed colour, quite dry, and passed with great pain. It became rapidly thin, and after a while its flesh so wasted, and became so flabby, that it might be said literally to hang on the bones. The fits of crying now increased in frequency and violence, coming on every time after the little one left the breast, when it would commence screaming violently, beat the air with its hands and feet, and nothing that was done could appease it. Having lasted for half an hour or more, it would fall asleep quite exhausted; the fit recurring again, when again it had been to the breast.

It was very evident that the infant's hunger was not satisfied, as it was also but too evident its body was not nourished by the parent's milk, which, although abundant in quantity (the breast

being large and full of milk), was at this time seriously deteriorated in its nutritive quality. This was caused, I believe, from great anxiety of mind. Her nurse became suddenly deranged, and the whole responsibility and care of the child thus devolved upon the mother, of the duties connected with which she was entirely ignorant.

A wet-nurse was obtained. In a very few hours after this change was effected, the screaming ceased, — the child had quiet and refreshing sleep, — and in twelve hours a healthy motion was passed. The child gained flesh almost as quickly as it had previously lost it, and is now as fine and healthy an infant as it promised to be when born.

Whenever there has existed previously any nervous or mental affection in the parent, wet-nurse suckling is always advisable; this, with judicious management of childhood, will do much to counteract the hereditary predisposition.

The mother who only nurses her infant when it suits her convenience ought not. — The mother who cannot make up her mind exclusively to

devote herself to the duties of a nurse, and give up all engagements that would interfere with her health, and so with the formation of healthy milk, and with the regular and stated periods of nursing her infant, ought never to suckle. It is unnecessary to say why; but I think it right, for the child's sake, to add, that if it does not sicken, pine, and die, *disease will be generated in its constitution*, to manifest itself at some future period.

The child, then, under all the foregoing circumstances, must be provided with its support from another source, and a wet-nurse is the best.

2. WET-NURSE SUCKLING.

Ill health and many other circumstances may prevent a parent from suckling her child, and render a wet-nurse necessary. Now, although she will do wisely to leave the choice of one to her medical attendant, still, as some difficulty may attend this, and as most certainly the mother herself ought to be acquainted with the principal points to which his attention is di-

rected in the selection of a good nurse, it will be well to point out in what they consist.

Choice of a Wet-nurse.

The first thing to which a medical man looks, is the general health of the woman; next, the condition of her breast, — the quality of her milk — its age and her own; whether she is ever unwell while nursing; and, last of all, the condition and health of the child.

Is the woman in good health? — Her general appearance ought to bear the marks of a sound constitution, and ought to be free from all suspicion of a strumous character; her tongue clean, and digestion good; her teeth and gums sound and perfect; her skin free from eruption, and her breath sweet.

What is the condition of the breast? — A good breast should be firm and well formed; its size not dependent upon a large quantity of fat, which will generally take away from its firmness, giving it a flabby appearance, but upon its glandular structure, which conveys to the touch a knotted, irregular, and hard feel; and the

nipple must be perfect, of moderate size, but well developed.

What is the quality of the milk? — It should be thin, and of a bluish-white colour; sweet to the taste; and when allowed to stand, should throw up a considerable quantity of cream.

What is its age? — If the lying-in month of the patient has scarcely expired, the wet-nurse to be hired ought certainly not to have reached her second month. At this time, the nearer the birth of the child, and the delivery of its foster-parent, the better: the reason for which is, that during the first few weeks the milk is thinner and more watery than it afterwards becomes. If, consequently, a new-born infant be provided with a nurse, who has been delivered three or four months, the natural relation between its stomach and the quality of the milk is destroyed, and the infant suffers from the oppression of food too heavy for its digestive power.

On the other hand, if you are seeking a wet-nurse for an infant of four or five months old, it would be very prejudicial to transfer the child to a woman recently delivered; the milk would

be too watery for its support, and its health in consequence would give way.

The nurse herself should not be too old! — A vigorous young woman from twenty-one to thirty admits of no question. And the woman who has had one or two children before is always to be preferred, as she will be likely to have more milk, and may also be supposed to have acquired some experience in the management of infants.

Inquire whether she is ever unwell while nursing? — If so, reject her at once. You will have no difficulty in ascertaining this point; for this class of persons have an idea that their milk is *renewed*, as they term it, by this circumstance, monthly; and, therefore, that it is a recommendation, rendering their milk fitter for younger children than it would otherwise have been. It produces, however, quite a contrary effect; it much impairs the milk, which will be found to disagree with the child, rendering it at first fretful, — after a time being vomited up, and productive of frequent watery dark green motions.

Last of all, *what is the condition of the child?* — It ought to have the sprightly appearance of

health, to bear the marks of being well nourished, its flesh firm, its skin clean and free from eruptions. It should be examined in this respect, particularly about the head, neck, and gums.

If a medical man finds that both mother and child answer to the above description, he has no hesitation in recommending the former as likely to prove a good wet-nurse.

Diet and Regimen of a Wet-nurse.

The regimen of a wet-nurse should not differ much from that to which she has been accustomed; and any change which it may be necessary to make in it should be gradual. It is erroneous to suppose that women when nursing require to be much more highly fed than at other times: a good nurse does not need this, and a bad one will not be the better for it. The quantity which many nurses eat and drink, and the indolent life which they too often lead, have the effect of deranging their digestive organs, and frequently induce a state of febrile excitement, which always diminishes, and even sometimes altogether disperses, the milk.

It will be necessary then to guard against the nurse overloading her stomach with a mass of indigestible food and drink. She should live as much as possible in the manner to which she has been accustomed; she should have a wholesome, mixed, animal and vegetable diet, and a moderate and somewhat extra quantity of malt liquor, provided it agree with her system.

A very prevailing notion exists that porter tends to produce a great flow of milk, and in consequence the wet-nurse is allowed as much as she likes; a large quantity is in this way taken, and after a short time so much febrile action excited in the system, that instead of increasing the flow of milk, it diminishes it greatly. Some parents, however, aware of this fact, will go into an opposite extreme, and refuse the nurse even that which is necessary. Either excess is of course wrong. It is difficult in general terms to say what ought to be considered a proper daily allowance, but some is in general necessary; and whenever a woman has been used to drink malt-liquor, she will rarely make a good wet-nurse if she is denied a reasonable quantity of that beverage. Good sound ale sometimes agrees better than porter. It

may be well here to remark, that in London, I frequently meet with severe cases of diarrhœa in infants at the breast, fairly traceable to bad porter, which vitiating the quality of the milk, no medical treatment cures the disease, until this beverage is left off or changed, when it at once disappears.

The nurse should take exercise daily in the open air. Nothing tends more directly to maintain a good supply of healthy milk, than air and exercise; and the best wet-nurse would soon lose her milk, if constantly kept within doors. Sponging the whole body also with cold water with bay-salt in it every morning, should be insisted upon, if possible: it preserves cleanliness, and greatly invigorates the health. United with this, the nurse should rise early, and also be regularly employed during the day in some little portion of duty in the family,—an attendance upon the wants of the child not being alone sufficient.

An amiable disposition and good temper are very desirable. A violent fit of passion may exert so peculiar an influence in changing the natural properties of the milk, that a child has

been known to be attacked with a fit of convulsions after being suckled by a nurse while labouring under the effects of a fit of anger. The depressing passions frequently drive the milk away altogether. It is hence of no small moment, that a wet-nurse be of a quiet and even temper, and not disposed to mental disturbance.

3. ARTIFICIAL FEEDING, OR BRINGING UP BY HAND.

Extreme delicacy of constitution, diseased condition of the frame, defective secretion of milk, and other causes, may forbid the mother suckling her child; and unless she can perform this office with safety to herself, and benefit to her infant, she ought not to attempt it. In this case a young and healthy wet-nurse is the best substitute; but even this resource is not always attainable. Under these circumstances, the child must be brought up on an artificial diet—"by hand," as it is popularly called.

To accomplish this with success requires the

most careful attention on the part of the parent, and at all times is attended with risk to the life of the child; for although some children, thus reared, live and have sound health, these are exceptions to the general rule, artificial feeding being in most instances unsuccessful.

The Kind of Artificial Food before the Sixth Month.

It should be as like the breast-milk as possible. This is obtained by a mixture of cow's milk, water, and sugar, in the following proportions: —

Fresh cow's milk, two thirds;
Boiling water, or thin barley water, one third;
Loaf sugar, a sufficient quantity to sweeten.

This is the best diet that can be used for the first six months, after which some farinaceous food may be combined.

In early infancy, mothers are too much in the habit of giving thick gruel, panada, biscuit-powder, and such matters, thinking that a diet of a lighter kind will not nourish. This is a

mistake; for these preparations are much too solid; they overload the stomach, and cause indigestion, flatulence, and griping. These create a necessity for purgative medicines and carminatives, which again weaken digestion, and, by unnatural irritation, perpetuate the evils which render them necessary. Thus many infants are kept in a continual round of repletion, indigestion, and purging, with the administration of cordials and narcotics, who, if their diet were in quantity and quality suited to their digestive powers, would need no aid from physic or physicians.

In preparing this diet, it is highly important to obtain pure milk, not previously skimmed, or mixed with water; and in warm weather just taken from the cow. It should not be mixed with the water or sugar until wanted, and not more made than will be taken by the child at the time, for it must be prepared fresh at every meal. It is best not to heat the milk over the fire, but let the water be in a boiling state when mixed with it, and thus given to the infant tepid or lukewarm.

As the infant advances in age, the proportion

of milk may be gradually increased; this is necessary after the second month, when three parts of milk to one of water may be allowed. But there must be no change in the kind of diet if the health of the child is good, and its appearance perceptibly improving. Nothing is more absurd than the notion, that in early life children require a variety of food; only one kind of food is prepared by nature, and it is impossible to transgress this law without marked injury.

If cow's milk disagree with an infant — and this is sometimes unfortunately the case, even from its birth — ass's milk, diluted with one third its quantity of water, may be given as a substitute. I am now attending a lady in her fourth confinement, who is unable, from defect in her nipples, to suckle her children. The *first child* had a healthy wet-nurse, and has grown a fine healthy lad. The *second*, a girl, was unfortunate in her nurse, she being of a strumous and unhealthy constitution, although to a casual observer bearing the appearance of health. The child lived only three months, and the nurse died of a rapid consumption shortly

after. This discouraged the mother from adopting wet-nurse suckling for the *third child* (a great error); and an artificial diet of cow's milk was resorted to. The third day from commencing this plan, flatulence, griping, purging, and vomiting came on, one symptom quickly following the other; the child wasted, and on the sixth day had several convulsive fits. The diet was immediately changed for ass's milk, and in less than twelve hours the sickness and purging ceased; the flatulence was relieved; the motions, from being green, watery, and passed with great violence and pain, became of a healthy consistence and colour, and the screaming ceased. The symptoms did not return, the child thrived, very soon consuming regularly one quart of the ass's milk daily, and is now a fine healthy girl two years old. A fortnight since the parent was confined with a *fourth child*. Cow's milk was given to it for two or three days (from the difficulty of obtaining that of the ass), the same train of symptoms, precisely, came on with which the third child had been affected, which again gave way upon following up the same plan of diet — the substitution of the ass's milk for that

of the cow. The evident conclusion from this is, that the breast-milk of a healthy woman is incomparably the most suitable diet for the infant; but that, if she be not of a healthy constitution, it may be destructive to the child; and that where this cannot be obtained, and cow's milk is found to disagree, ass's milk may sometimes be resorted to with the happiest results.*

Sometimes the mother's breast, and every description of milk, is rejected by the child; in which case recourse must be had to veal or weak mutton broth, or beef tea, clear and free from fat, mixed with a very small quantity of farinaceous food, carefully passed through a sieve before it is poured into the sucking-bottle.

The mode of administering it. — There are two ways — by the spoon, and by the nursing-

* An infant will generally consume a quart, or a little more, of ass's milk in the four and twenty hours; and as this quantity is nearly as much as the animal will give, it is best to purchase an ass for the express purpose. The foal must be separated from the mother, and the forage of the latter carefully attended to, or the milk will disagree with the child.

bottle. The first ought never to be employed at this period, inasmuch as the power of digestion in infants is very weak, and their food is designed by nature to be taken very slowly into the stomach, being procured from the breast by the act of sucking, in which act a great quantity of saliva is secreted, and being poured into the mouth, mixes with the milk, and is swallowed with it. This process of nature, then, should be emulated as far as possible; and food (for this purpose) should be imbibed by suction from a nursing-bottle: it is thus obtained slowly, and the suction employed secures the mixture of a due quantity of saliva, which has a highly important influence on digestion.

Too much care cannot be taken to keep the bottle perfectly sweet. For this purpose there should always be two in the nursery, to be used alternately; and, if any food remain after a meal, it must be emptied out. The bottle must always be scalded out after use. The flat glass nursing-bottle itself is too well known to need description; it may be well, however, to say a word about the teat that covers its narrow neck, and through which the infant sucks the food.

If the artificial or prepared cow's teat is made use of, it should be so attached to the bottle that its extremity does not extend beyond its apex more than half or three quarters of an inch; for if it projects more than this, the child will get the sides of the teat so firmly pressed together between its gums, that there will be no channel for the milk to flow through. This remark applies equally to the teat made of soft wash-leather, which many ladies prefer to that of the cow, and it is a good substitute; but then a fresh piece of leather must be made use of daily, otherwise the food will be tainted, and the child's bowels deranged. It is also necessary that both of these, when used, should have a small conical piece of sponge inclosed.

The most cleanly and convenient apparatus is a cork nipple, upon the plan of M. Darbo, of Paris, fixed in the sucking-bottle.* The cork, being of a particularly fine texture, is supple and elastic, yielding to the infant's lips while sucking, and is much more durable than the teats ordinarily used.

* Sold by Weiss & Son, 62. Strand.

Whatever kind of bottle or teat is used, however, it must never be forgotten that cleanliness is absolutely essential to the success of this plan of rearing children.

The quantity of food to be given at each meal. — This must be regulated by the age of the child, and its digestive power. A little experience will soon enable a careful and observing mother to determine this point. — As the child grows older the quantity of course must be increased.

The chief error in rearing the young is overfeeding; and a most serious one it is; but which may be easily avoided by the parent pursuing a systematic plan with regard to the hours of feeding, and then only yielding to the indications of appetite, and administering the food slowly, in small quantities at a time. This is the only way effectually to prevent indigestion, and bowel complaints, and the irritable condition of the nervous system, so common in infancy, and secure to the infant healthy nutrition, and consequent strength of constitution. As has been well observed, "Nature never

intended the infant's stomach to be converted into a receptacle for laxatives, carminatives, antacids, stimulants, and astringents; and when these become necessary, we may rest assured that there is something faulty in our management, however perfect it may seem to ourselves."

The frequency of giving food. — This must be determined, as a general rule, by allowing such an interval between each meal as will insure the digestion of the previous quantity; and this may be fixed at about every three or four hours. If this rule be departed from, and the child receives a fresh supply of food every hour or so, time will not be given for the digestion of the previous quantity, and as a consequence of this process being interrupted, the food passing on into the bowel undigested, will there ferment and become sour, will inevitably produce cholic and purging, and in no way contribute to the nourishment of the child.

The posture of the child when fed. — It is important to attend to this. It must not receive

its meals lying; the head should be raised on the nurse's arm, the most natural position, and one in which there will be no danger of the food going the wrong way, as it is called. After each meal the little one should be put into its cot, or repose on its mother's knee, for at least half an hour. This is essential for the process of digestion, as exercise is important at other times for the promotion of health.

The Kind of Artificial Food after the Sixth Month, to the Completion of first Dentition.

As soon as the child has got any teeth, — and about this period one or two will make their appearance, — solid farinaceous matter boiled in water, beaten through a sieve, and mixed with a small quantity of milk, may be employed. Or tops and bottoms, steeped in hot water, with the addition of fresh milk and loaf sugar to sweeten. And the child may now, for the first time, be fed with a spoon.

When one or two of the large grinding teeth

have appeared, the same food may be continued, but need not be passed through a sieve. Beef tea and chicken broth may occasionally be added; and, as an introduction to the use of a more completely animal diet, a portion, now and then, of a soft boiled egg; by and by a small bread pudding, made with one egg in it, may be taken as the dinner meal.

Nothing is more common than for parents during this period to give their children *animal food.* This is a great error. "To feed an infant with animal food before it has teeth proper for masticating it, shows a total disregard to the plain indications of nature, in withholding such teeth till the system requires their assistance to masticate solid food. And the method of grating and pounding meat, as a substitute for chewing, may be well suited to the toothless octogenarian, whose stomach is capable of digesting it; but the stomach of a young child is not adapted to the digestion of such food, and will be disordered by it." *

"If the principles already laid down be

* Sir James Clarke on Consumption.

true, it cannot reasonably be maintained that a child's mouth without teeth, and that of an adult, furnished with the teeth of carnivorous and graminivorous animals, are designed by the Creator for the same sort of food. If the mastication of solid food, whether animal or vegetable, and a due admixture of saliva, be necessary for digestion, then solid food cannot be proper, when there is no power of mastication. If it is swallowed in large masses it cannot be masticated at all, and will have but a small chance of being digested; and in an undigested state it will prove injurious to the stomach and to the other organs concerned in digestion, by forming unnatural compounds. The practice of giving solid food to a toothless child, is not less absurd, than to expect corn to be ground where there is no apparatus for grinding it. That which would be considered as an evidence of idiotism or insanity in the last instance, is defended and practised in the former. If, on the other hand, to obviate this evil, the solid matter, whether animal or vegetable, be previously broken into small masses,

the infant will instantly swallow it, but it will be unmixed with saliva. Yet in every day's observation it will be seen, that children are so fed in their most tender age; and it is not wonderful that present evils are by this means produced, and the foundation laid for future disease." *

The diet pointed out, then, is to be continued until the second year. Great care, however, is necessary in its management; for this period of infancy is ushered in by the process of teething, which is commonly connected with more or less of disorder of the system. Any error, therefore, in diet or regimen is now to be most carefully avoided. 'Tis true that the infant, who is of a sound and healthy constitution, in whom, therefore, the powers of life are energetic, and who up to this time has been nursed upon the breast of its parent, and now commences an artificial diet for the first time, disorder is scarcely perceptible, unless from the operation of very efficient causes. Not so,

* Dr. John Clarke's Commentaries.

however, with the child who from the first hour of its birth has been nourished upon artificial food. Teething under such circumstances is always attended with more or less of disturbance of the frame, and disease of the most dangerous character but too frequently ensues. It is at this age, too, that all infectious and eruptive fevers are most prevalent; worms often begin to form, and diarrhœa, thrush, rickets, cutaneous eruptions, &c. manifest themselves, and the foundation of strumous disease is originated or developed. A judicious management of diet will prevent some of these complaints, and mitigate the violence of others when they occur.

The Kind of Artificial Diet most suitable under the different Complaints to which Infants are liable.

Artificial food, from mismanagement and other causes, will now and then disagree with the infant. The stomach and bowels are thus deranged, and medicine is resorted to, and again and again the same thing occurs.

This is wrong, and but too frequently productive of serious and lasting mischief. *Alteration of diet*, rather than the exhibition of medicine, should, under these circumstances, be relied on for remedying the evil. Calomel, and such like remedies, "the little powders of the nursery," ought not to be given on every trivial occasion. More mischief has been effected, and more positive disease produced, by the indiscriminate use of the above powerful drug, either alone or in combination with other drastic purgatives, than would be credited. Purgative medicines ought at all times to be exhibited with caution to an infant, for so delicate and susceptible is the structure of its alimentary canal, that disease is but too frequently caused by that which was resorted to in the first instance as a remedy. The bowels should always be kept free; but then it must be by the mildest and least irritating means.

It is a very desirable thing, then, to correct the disordered conditions of the digestive organs of an infant, if possible, without medicine; and much may be done by changing the nature, and

sometimes by simply diminishing the quantity, of food.

A diarrhœa, or looseness of the bowels, may frequently be checked by giving, as the diet, sago thoroughly boiled in very weak beef-tea, with the addition of a little milk. The same purpose is frequently to be answered by two thirds of arrow-root with one third of milk, or simply thin arrow-root made with water only; or, if these fail, baked flour, mixed with boiled milk.

Costiveness of the bowels may frequently be removed by changing the food to tops and bottoms steeped in hot water, and a small quantity of milk added, — or prepared barley, mixed in warm water and unboiled milk.

Flatulence and griping generally arise from an undue quantity of food, which passing undigested into the bowels, they are thus irritated and disturbed. This may be cured by abstinence alone. The same state of things may be caused by the food not being prepared fresh at every meal, or even from the nursing-bottle or vessel in which the food is given not having been perfectly clean. In this case weak chicken-broth, or beef-tea freed

from fat, and thickened with soft boiled rice or arrow-root, may be given.

SECT. II. — WEANING.

THE TIME WHEN TO TAKE PLACE.—The time when weaning is to take place must ever depend upon a variety of circumstances, which will regulate this matter, independently of any general rule that might be laid down. The mother's health may, in one case, oblige her to resort to weaning before the sixth month, and, in another instance, the delicacy of the infant's health, to delay it beyond the twelfth. Nevertheless, as a general rule, both child and parent being in good health, weaning ought never to take place earlier than the ninth (the most usual date), and never delayed beyond the twelfth month.

I should say further, that if child and parent are both in vigorous health, if the infant has cut several of its teeth, and been already accustomed to be partially fed, weaning ought to be

gradually accomplished at the ninth month. On the other hand, that if the child is feeble in constitution, the teeth late in appearing, and the mother is healthy, and has a sufficient supply of good milk, especially if it be the autumnal season, it will be far better to prolong the nursing for a few months. In such a case, the fact of the non-appearance of the teeth indicates an unfitness of the system for any other than the natural food from the maternal breast.

And again, if the infant is born of a consumptive parent, and a healthy and vigorous wet-nurse has been provided, weaning should most certainly be deferred beyond the usual time, carefully watching, however, that neither nurse nor child suffer from its continuance.

THE MODE.—It should be effected gradually. From the sixth month most children are fed twice or oftener in the four-and-twenty hours; the infant is in fact, therefore, from this time in the progress of weaning; that is to say, its natural diet is partly changed for an artificial one, so that when the time for complete weaning arrives, it will be easily accomplished, without

suffering to the mother, or much denial to the child.

It is, however, of the greatest importance to regulate the quantity and quality of the food at this time. If too much food is given (and this is the great danger) the stomach will be overloaded, the digestive powers destroyed, and if the child is not carried off suddenly by convulsions, its bowels will become obstinately disordered; it will fall away from not being nourished, and perhaps eventually become a sacrifice to the over-anxious desire of the parent and its friends to promote its welfare.

The kind of food proper for this period, and the mode of administering it, is detailed in the previous section, on "Artificial Feeding."*

Much exercise in the open air (whenever there is no dampness of atmosphere) is highly necessary and beneficial at this time; it tends to invigorate the system, and strengthens the digestive organs, and thus enables the latter to bear without injury the alteration in diet.

* The kind of food after the sixth month to the completion of first dentition, p. 44.

THE DRYING UP OF THE MOTHER'S MILK. — This will generally be attended with no difficulty. When the weaning is effected gradually, the milk will usually go away of itself without any measures being resorted to. If, however, the breasts should continue loaded, or indeed painfully distended, a gentle aperient should be taken every morning, so that the bowels are kept slightly relaxed; the diet must be diminished in quantity, and solid nourishment only taken. The breast, if painfully distended, must be occasionally drawn, but only just sufficiently to relieve the distention. In either case they must be rubbed for five or ten minutes, every four or five hours, with the following liniment, previously warmed: —

Compound soap liniment, one ounce and a half;
Laudanum, three drachms.

SECT. III. — DIETETICS OF CHILDHOOD.

CHILDHOOD, as has been before intimated, extends from about the second to the seventh

or eighth year, when the second dentition is commenced.

No precise rules of diet can be laid down for this period, as this requires to be adapted in every case to the particular constitution concerned. There are, however, certain general principles which must be acted upon, and which can be easily modified by a judicious and observant parent, as circumstances and constitution may require.

GENERAL DIRECTIONS, AND OF ANIMAL FOOD. — The diet of the latter months of infancy is still to be continued, but with the important addition of animal food, which the child has now got teeth to masticate. This must be given in small quantity; it should be of the lightest quality, only allowed on alternate days, and even then its effects must be carefully watched, as all changes in the regimen of children should be gradual.

A child at this age, then, should have its meals at intervals of about four hours: thus — its *breakfast* between seven and eight o'clock, to consist of tops and bottoms, steeped in hot

water, a little milk added, and the whole sweetened with sugar; or bread may be softened in hot water, the latter drained off, and fresh milk and sugar added to the bread. Its *dinner* about twelve o'clock, to consist, every other day, of a small quantity of animal food (chicken, fresh mutton, or beef, being the only meats allowed) with a little bread and water; on the alternate days, well boiled rice and milk, a plain bread, sago, tapioca, or arrow-root pudding, containing one egg; or farinaceous food, with beef-tea. Its *afternoon meal*, about four o'clock, the same diet as formed the breakfast. At *seven*, a little arrow-root, made with a very small proportion of milk, or a biscuit, or crust of bread, after which the child should be put to bed.

The child must be taught to take its food slowly, retain it in its mouth long, and swallow it tardily. Nothing must be given in the intervals of the meals. The stomach requires a period of repose after the labour of digestion; and if the child is entertained by its nurse, and its mind occupied, there will be no difficulty in following out this important direction.

As the child grows older, the quantity at each meal should be increased; the tops and bottoms changed for bread and pure milk, boiled or not; meat may be taken daily, except circumstances forbid it; and a small quantity of vegetable also.

If a child, then, be of *a sound constitution*, with healthy bowels, a cool skin, and clean tongue, the diet may be liberal, and provided it is sufficiently advanced in age, animal food may be taken daily. Too low a diet would stint the growth of such a child, and induce a state of body deficient in vigour, and unfit for maintaining full health: scrofula and other diseases would be induced. At the same time let the mother guard against pampering, for this would lead to evils no less formidable, though of a different character. And as long as the general health of this child is unimpaired, the body and mind active, and no evidence present to mark excess of nutriment, this diet may be continued. But if languor at any time ensue, fever become manifested, the skin hotter than natural, the tongue white and furred, and the bowels irregular, then, though these symptoms should be

only in slight degree, and unattended with any specific derangement amounting to what is considered disease, not only should the parent lower the diet, and for a time withdraw the animal part, but the medical adviser should be consulted, that measures may be taken to correct the state of repletion which has been suffered to arise. For some time after its removal, care should also be taken to keep the diet under that, which occasioned the constitutional disturbance.

But if the child be of *a delicate and weakly constitution* (and this is unfortunately the more common case), it will not bear so generous a diet as the foregoing. During the three or four earliest years, it should be restricted chiefly to a mild farinaceous diet, with a small allowance only of meat on alternate days. The constant endeavour of the parent now should be, to seek to increase the digestive power and bodily vigour of her child by frequent exercise in the open air, and by attention to those general points of management detailed in the after-part of this chapter. This accomplished, a greater proportion of animal food may be given, and,

in fact, will become necessary for the growth of the system, while at the same time there will be a corresponding power for its assimilation and digestion.

A great error in the dietetic management of such children is but too frequently committed by parents. They suppose that because their child is weakly and delicate, that the more animal food it takes the more it will be strengthened, and they therefore give animal food too early, and in too great quantity. It only adds to its debility. The system, as a consequence, becomes excited, nutrition is impeded, and disease produced, ultimately manifesting itself in scrofula, disease in the abdomen, head, or chest. The first seeds of consumption are but too frequently originated in this way. A child so indulged will eat heartily enough, but he remains thin notwithstanding. After a time he will have frequent fever, will appear heated and flushed towards evening, when he will drink greedily, and more than is usual in children of the same age; there will be deranged condition of the bowels, and headach, — the child will soon become peevish, irritable, and impatient;

it will entirely lose the good humour so natural to childhood, and that there is something wrong will be evident enough, the parent, however, little suspecting the real cause and occasion of all the evil. In such a child, too, it will be found that the ordinary diseases of infancy, scarlet fever, measles, small pox, &c., will be attended with an unusual degree of constitutional disturbance; that it will not bear such active treatment as other children, or so quickly rally from the illness.

"Strength is to be obtained not from the kind of food which contains most nourishment in itself, but from that which is best adapted to the condition of the digestive organs at the time when it is taken."

Sugar. — This is a necessary condiment for the food of children, and it is nutritious, and does not injure the teeth, as is generally imagined. "During the sugar season," observes Dr. Dunglison, "the negroes of the West India islands drink copiously of the juice of the cane, yet their teeth are not injured; on the contrary, they have been praised by writers for their beauty

and soundness; and the rounded form of the body, whilst they can indulge in the juice, sufficiently testifies to the nutrient qualities of the saccharine beverage." * Sweetmeats, on the other hand, are most indigestible, and seriously injurious.

SALT.—This is necessary for the health of a child; it acts as a stimulant to the digestive organs, and if not allowed in sufficient quantity with the food, worms will result. † It may, therefore, be added in small quantity, and with advantage, even to the farinaceous food of infants. Salted meats, however, should never be

* Elements of Hygiem. Philadephia, 1835.

† Lord Sommerville, in his Address to the Board of Agriculture, gave an interesting account of the effects of a punishment which formerly existed in Holland. "The ancient laws of the country ordained men to be kept on bread alone, *unmixed with salt*, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible: these wretched criminals are said to have been devoured by worms engendered in their own stomachs."

"The wholesomeness and digestibility of our bread are undoubtedly much promoted by the addition of the salt which it so universally receives. A pound of salt is generally added to each bushel of flour. Hence it may be presumed, that every adult consumes two ounces of salt per week, or six pounds and a half per annum, in bread alone."

DR. PARIS *on Diet.*

permitted to the child; for by the process of salting the fibre of the meat is so changed, that it is less nutritive, as well as less digestible.

FRUITS. — These, and of all kinds whether fresh or dried, a *delicate* child is better without; except the orange, which when perfectly ripe may be allowed to any child, but the white or inner skin should be scrupulously rejected, as it is most indigestible.

A *healthy* child may be permitted to partake of most fresh fruits. Of the stone-fruits, the ripe peach, the apricot, and nectarine, are the most wholesome; but cherries, from the stones being but too frequently swallowed, had better not be allowed. Apples and pears, when ripe and well masticated, are not unwholesome; and the apple when baked affords a pleasant repast, and where there is a costive habit, it is useful as a laxative. The small-seeded fruits, however, are by far the most wholesome. Of these, the ripe strawberry and raspberry deserve the first rank. The grape is also cooling and antiseptic, but the husks and seeds should be rejected. The gooseberry is less wholesome

on account of the indigestibility of the skin, which is too frequently swallowed.

Dried fruits a child should never be permitted to eat.

WATER. — This should be the only beverage throughout childhood. Toast-and-water, if the child prefer it, which is rendered slightly more nutritive than the more simple fluid. The water employed in its preparation, however, must be at a boiling temperature, and it ought to be drunk as soon as it has sufficiently cooled; for by being kept, it acquires a mawkish and unpleasant flavour.

WINE, BEER, &c. — The practice of giving wine, or, indeed, any stimulant, to a healthy child, is highly reprehensible; it ought never to be given but medicinally.

The circulation in infancy and childhood is not only more rapid than in the adult, but easily excited to greater vehemence of action; the nervous system, too, is so susceptible, that the slightest causes of irritation produce strong

and powerful impressions: the result in either case is diseased action in the frame, productive of fever, convulsions, &c.; wine, accordingly, is detrimental to children.

An experiment made by Dr. Hunter upon two of his children illustrates, in a striking manner, the pernicious effects of even a small portion of intoxicating liquors in persons of this tender age. To one of the children he gave, every day after dinner, a full glass of sherry: the child was five years of age, and unaccustomed to the use of wine. To the other child, of nearly the same age, and equally unused to wine, he gave an orange. In the course of a week, a very marked difference was perceptible in the pulse, urine, and evacuations from the bowels of the two children. The pulse of the first was raised, the urine high coloured, and the evacuations destitute of their usual quantity of bile. In the other child, no change whatever was produced. He then reversed the experiment, giving to the first the orange, and to the second the wine, and the results corresponded: the child who had the orange continued well, and

the system of the other got straightway into disorder, as in the first experiment.*

In this town, spirits, particularly gin, are given to infants and children to a frightful extent. I have seen an old Irish woman give diluted spirits to the infant just born. A short time since one of those dram-drinking children, about eight years of age, was brought into one of our hospitals. The attendants, from its emaciated appearance, considered the child was dying from mere starvation; which was true enough in a certain sense. Food was accordingly offered and pressed upon it, but the boy would not even put it to his lips. The next day it was discovered that the mother brought the child very nearly a pint of gin, every drop of which before night he had consumed.

It is easy to discover when children have been fed upon spirits: they are always emaciated; have a lean, yellow, haggard look: the eyes sunk, the lips pale, and the teeth discoloured, the cadaverous aspect of the counte-

* Marcellin relates an instance of seven children in a family whose bowels became infested with worms, from the use of stimulants. They were cured by substituting water for the pernicious beverage.

nance being most fearful. They are continually suffering from bowel complaints and convulsive disorders; which, under these circumstances, terminate invariably in an early death.

SECT. IV. — SLEEP.

During Infancy.— For three or four weeks after birth the infant sleeps more or less, day and night, only waking to satisfy the demands of hunger; at the expiration of this time, however, each interval of wakefulness grows longer, so that it sleeps less frequently, but for longer periods at a time.

This disposition to repose in the early weeks of the infant's life must not be interfered with; but this period having expired, great care is necessary to induce regularity in its hours of sleep, otherwise too much will be taken in the day-time, and restless and disturbed nights will follow. The child should be brought into the habit of sleeping in the middle of the day, before its dinner, and for about two hours, more

or less. If put to rest at a later period of the day, it will invariably cause a bad night.

At first the infant should sleep with its parent. The low temperature of its body, and its small power of generating heat, render this necessary. If it should happen, however, that the child has disturbed and restless nights, it must immediately be removed to the bed and care of another female, to be brought to its mother at an early hour in the morning, for the purpose of being nursed. This is necessary for the preservation of the mother's health, which through sleepless nights would of course be soon deranged, and the infant would also suffer from the influence which such deranged health would have upon the milk.

When a month or six weeks has elapsed, the child, if healthy, may sleep alone in a cradle or cot, care being taken that it has a sufficiency of clothing, that the room in which it is placed is sufficiently warm, viz. 60°, and the position of the cot itself is not such as to be exposed to currents of cold air. It is essentially necessary to attend to these points, since the faculty of producing heat, and consequently the power of

maintaining the temperature, is less during sleep than at any other time, and therefore exposure to cold is especially injurious. It is but too frequently the case that inflammation of some internal organ will occur under such circumstances, without the true source of the disease ever being suspected. Here, however, a frequent error must be guarded against, that of covering up the infant in its cot with too much clothing — throwing over its face the muslin handkerchief — and, last of all, drawing the drapery of the bed closely together. The object is to keep the infant sufficiently warm with pure air; it therefore ought to have free access to its mouth, and the atmosphere of the whole room should be kept sufficiently warm to allow the child to breathe it freely: in winter, therefore, there must always be a fire in the nursery.

The child up to two years old, at least, should sleep upon a feather bed, for the reasons referred to above. The pillow, however, after the sixth month, should be made of horsehair; for at this time teething commences, and it is

highly important that the head should be kept cool.

DURING CHILDHOOD. — Up to the third or fourth year the child should be permitted to sleep for an hour or so before its dinner. After this time it may gradually be discontinued; but it must be recollected, that during the whole period of childhood more sleep is required than in adult age. The child, therefore, should be put to rest every evening between seven and eight; and if it be in health it will sleep soundly until the following morning. No definite rule, however, can be laid down in reference to the number of hours of sleep to be allowed; for one will require more or less than another.* Regularity as to the time of going to rest is the chief point to attend to; permit

* The amount of sleep necessary to preserve health varies according to the state of the body, and the habits of the individual. As already observed, infants pass much the greater portion of their time in sleep. Children sleep twelve or fourteen hours. The schoolboy generally ten. In youth, a third part of the twenty-four hours is spent in sleep. Whilst, in advanced age, many do not spend more than four, five, or six hours in sleep.

nothing to interfere with it, and then only let the child sleep without disturbance, until it awakes of its own accord on the following morning, and it will have had sufficient rest.

It is a cruel thing for a mother to sacrifice her child's health that she may indulge her own vanity, and yet how often is this done in reference to sleep. An evening party is to assemble, and the little child is kept up for hours beyond its stated time for retiring to rest, that it may be exhibited, fondled, and admired. Its usual portion of sleep is thus abridged, and, from the previous excitement, what little he does obtain, is broken and unrefreshing, and he rises on the morrow wearied and exhausted.

Once awake, it should not be permitted to lie longer in bed, but should be encouraged to arise immediately. This is the way to bring about the habit of early rising, which prevents many serious evils to which parents are not sufficiently alive, promotes both mental and corporeal health, and of all habits is said to be the most conducive to longevity.

A child should never be suddenly aroused from sleep; it excites the brain, quickens the

action of the heart, and, if often repeated, serious consequences would result. The change of sleeping to waking should always be gradual.

The bed on which the child now sleeps should be a mattress: at this age a feather bed is always injurious to children; for the body, sinking deep into the bed, is completely buried in feathers, and the unnatural degree of warmth thus produced relaxes and weakens the system, particularly the skin, and renders the child unusually susceptible to the impressions of cold. Then, instead of the bed being made up in the morning as soon as vacated, and while still saturated with the nocturnal exhalations from the body, the bed-clothes should be thrown over the backs of chairs, the mattress shaken well up, and the window thrown open for several hours, so that the apartment shall be thoroughly ventilated. It is also indispensably requisite not to allow the child to sleep with persons in bad health, or who are far advanced in life; if possible, it should sleep alone.

SECT. V. — BATHING AND CLEANLINESS.

DURING INFANCY. — Too much attention cannot be paid to cleanliness; it is essential to the infant's health. The principal points to which especial attention must be paid by the parent for this purpose are the following: —

Temperature of the water. — At first the infant should be washed daily with warm water; and a bath every night, for the purpose of thoroughly cleaning the body, is highly necessary. To bathe a delicate infant of a few days or even weeks old in cold water with a view "to harden" the constitution (as it is called), is the most effectual way to undermine its health and entail future disease. By degrees, however, the water with which it is sponged in the morning should be made tepid, the evening bath being continued warm enough to be grateful to the feelings.

A few months having passed by, the temperature of the water may be gradually lowered until cold is employed, with which it may be

either sponged or even plunged into it, every morning during summer. If plunged into cold water, however, it must be kept in but a minute; for at this period, especially, the impression of cold continued for any considerable time depresses the vital energies, and prevents that healthy glow on the surface which usually follows the momentary and brief action of cold, and upon which its usefulness depends. With some children, indeed, there is such extreme delicacy and deficient reaction as to render the cold bath hazardous; no warm glow over the surface takes place when its use inevitably does harm: its effects, therefore, must be carefully watched.

Drying the skin. — The surface of the skin should always be carefully and thoroughly rubbed dry with flannel,—indeed, more than dry, for the skin should be warmed and stimulated by the assiduous gentle friction made use of. For this process of washing and drying must not be done languidly, but briskly and expeditiously; and will then be found to be one of the most effectual means of strengthening the infant. It is especially necessary carefully to dry the arm-

pits, groins, and nates; and if the child is very fat, it will be well to dust over these parts with hair-powder or starch: this prevents excoriations and sores, which are frequently very troublesome. Soap is only required to those parts of the body which are exposed to the reception of dirt.

Napkins. — The frequency of the discharges from the bowels and bladder requires a frequent change of napkins. A nurse cannot be too careful of this duty from the first, so that she may be enabled to discover the periods when those discharges are about to take place, that she may not only anticipate them, but teach the child, at a very early age, to give intelligent warning of its necessities. Thus a habit of regularity with regard to those functions will be established, which will continue through life, and tend greatly to the promotion of health. As the child grows older, the system of cleanliness must in no particular be relaxed, and it will be found the best preservative against those eruptive disorders which are so frequent and troublesome during the period of infancy.

DURING CHILDHOOD. — When this period arrives, or shortly after, bathing is but too frequently left off; the hands and face of the child are kept clean, and with this the nurse is satisfied; the daily ablution of the *whole* body, however, is still necessary, not only for the preservation of cleanliness, but because it promotes in a high degree the health of the child.

Plan to be pursued with the vigorous and healthy. — A child of a vigorous constitution and robust health, as he rises from his bed refreshed and active by his night's repose, should be put into the shower-bath, or, if this excites and alarms him too much, must be sponged from head to foot with salt water. If the weather be very cold, the water may be made slightly tepid, but if his constitution will bear it, the water should be cold throughout the year. Then the body should be speedily dried, and hastily but well rubbed with a somewhat coarse towel, and the clothes put on without any unnecessary delay. This should be done every morning of the child's life.

If such a child is at the sea-side, advantage

should be taken of this circumstance, and sea-bathing should be substituted. The best time is two or three hours after breakfast; but he must not be fatigued beforehand, for if so, the cold bath cannot be used without danger. Care must be taken that he does not remain in too long, as the animal heat will be lowered below the proper degree, which would be most injurious. In boys of a feeble constitution, great mischief is often produced in this way. It is a matter also of great consequence in bathing children that they should not be terrified by the immersion, and every precaution should be taken to prevent this. The healthy and robust boy, too, should early be taught to swim, whenever this is practicable, for it is attended with the most beneficial effects; it is a most invigorating exercise, and the cold bath thus becomes doubly serviceable.

Plan to be pursued with the delicate and strumous. — If a child is of a delicate and strumous constitution, the cold bath during the summer is one of the best tonics that can be employed; and if living on the coast, sea-bathing will be

found of singular benefit. The effects, however, of sea-bathing upon such a constitution must be particularly watched, for unless it is succeeded by a glow, — a feeling of increased strength, — and a keen appetite, it will do no good, and ought at once to be abandoned for the warm or tepid bath. The opinion that warm baths generally relax and weaken, is erroneous; for in this case, as in all cases when properly employed, they would give tone and vigour to the whole system; in fact, the tepid bath is to this child what the cold bath is to the more robust.

In conclusion: if the bath in any shape cannot from circumstances be obtained, then cold salt-water sponging must be used daily, and all the year round, so long as the proper reaction or glow follows its use; but when this is not the case,— and this will generally occur, if the child is delicate and the weather cold, — tepid vinegar and water, or tepid salt water, must be substituted.

SECT. VI. — CLOTHING.

In Infancy. — Infants are very susceptible of the impressions of cold; a proper regard, therefore, to a suitable clothing of the body, is imperative to their enjoyment of health. Unfortunately, an opinion is prevalent in society, that the tender child has naturally a great power of generating heat and resisting cold; and from this popular error has arisen the most fatal results. This opinion has been much strengthened by the insidious manner in which cold operates on the frame,—the injurious effects not being always manifest during or immediately after its application,—so that but too frequently the fatal result is traced to a wrong source, or the infant sinks under the action of an unknown cause.

The power of generating heat in warm-blooded animals is at its minimum at birth, and increases successively to adult age; young animals, instead of being warmer than adults, are generally a degree or two colder, and part with

their heat more readily; facts which cannot be too generally known. They show how absurd must be the folly of that system of "hardening" the constitution (to which reference has been before made), which induces the parent to plunge the tender and delicate child into the cold bath at all seasons of the year, and freely expose it to the cold, cutting currents of an easterly wind, with the lightest clothing.

The principles which ought to guide a parent in clothing her infant are as follows: —

The material and quantity of the clothes should be such as to preserve a sufficient proportion of warmth to the body, regulated therefore by the season of the year, and the delicacy or strength of the infant's constitution. In effecting this, however, the parent must guard against the too common practice of enveloping the child in innumerable folds of warm clothing, and keeping it constantly confined to very hot and close rooms; thus running into the opposite extreme to that to which I have just alluded: for nothing tends so much to enfeeble the constitution, to induce disease, and render the skin highly susceptible to the impression of cold; and thus to

produce those very ailments which it is the chief intention to guard against.

In their make they should be so arranged as to put no restrictions to the free movements of all parts of the child's body; and so loose and easy as to permit the insensible perspiration to have a free exit, instead of being confined to and absorbed by the clothes, and held in contact with the skin, till it gives rise to irritation.

In their quality they should be such as not to irritate the delicate skin of the child. In infancy, therefore, flannel is rather too rough, but is desirable as the child grows older, as it gives a gentle stimulus to the skin, and maintains health.

In its construction the dress should be so simple as to admit of being quickly put on, since dressing is irksome to the infant, causing it to cry, and exciting as much mental irritation as it is capable of feeling. Pins should be wholly dispensed with, their use being hazardous through the carelessness of nurses, and even through the ordinary movements of the infant itself.

The clothing must be changed daily. — It is eminently conducive to good health that a com-

plete change of dress should be made every day. If this is not done, washing will, in a great measure, fail in its object, especially in insuring freedom from skin diseases.

In Childhood. — The clothing of the child should possess the same properties as that of infancy. It should afford due warmth, be of such materials as do not irritate the skin, and so made as to occasion no unnatural constriction.

In reference to *due warmth*, it may be well again to repeat, that too little clothing (that state of semi-nudity which the vanity of some parents encourage) is frequently productive of the most sudden attacks of active disease; and that children who are thus exposed with naked breasts and thin clothing in a climate so variable as ours are the frequent subjects of croup, and other dangerous affections of the air-passages and lungs. On the other hand, it must not be forgotten, that too warm clothing is a source of disease, — sometimes even of the same diseases which originate in exposure to cold, — and often renders the frame more sus-

ceptible of the impressions of cold, especially of cold air taken into the lungs. Regulate the clothing, then, according to the season; resume the winter dress early; lay it aside late; for it is in spring and autumn that the vicissitudes in our climate are greatest, and congestive and inflammatory complaints most common.

With regard to *material* (as was before observed), the skin will at this age bear flannel next to it; and it is now not only proper, but necessary. It may be put off with advantage during the night, and cotton may be substituted during the summer, the flannel being resumed early in the autumn. If from very great delicacy of constitution it proves too irritating to the skin, fine fleecy hosiery will in general be easily endured, and will greatly conduce to the preservation of health.

It is highly important that the clothes of the boy should be so made that no restraints shall be put on the movements of the body or limbs, nor injurious pressure made on his waist or chest. All his muscles ought to have full liberty to act, as their free exercise promotes both their growth and activity, and thus insures the regu-

larity and efficiency of the several functions to which these muscles are subservient.

The same remarks apply with equal force to the dress of the girl; and happily, during childhood, at least, no distinction is made in this matter between the sexes. Not so, however, when the girl is about to emerge from this period of life; a system of dress is then adopted which has the most pernicious effects upon her health, and the development of the body, — the employment of tight stays, which impede the free and full action of the respiratory organs, being only one of the many restrictions and injurious practices from which in latter years they are thus doomed to suffer so severely.

SECT. VII. — AIR AND EXERCISE.

In Infancy. — The respiration of a pure air is at all times, and under all circumstances, indispensable to the health of the infant. The nursery therefore should be large, well ventilated, in an elevated part of the house, and so

situated as to admit a free supply both of air and light. For the same reasons, the room in which the infant sleeps should be large, and the air frequently renewed; for nothing is so prejudicial to its health as sleeping in an impure and heated atmosphere. The practice, therefore, of drawing thick curtains closely round the bed is highly pernicious; they only answer a useful purpose when they defend the infant from any draught of cold air.

The proper time for taking the infant into the open air must, of course, be determined by the season of the year, and the state of the weather. "A *delicate* infant born late in the autumn will not generally derive advantage from being carried into the open air, in this climate, till the succeeding spring; and if the rooms in which he is kept are large, often changed, and well ventilated, he will not suffer from the confinement, while he will, most probably, escape catarrhal affections, which are so often the consequence of the injudicious exposure of infants to a cold and humid atmosphere." * If, how-

* Sir James Clark on Consumption.

ever, the child is *strong* and *healthy*, no opportunity should be lost of taking it into the open air at stated periods, experience daily proving that it has the most invigorating and vivifying influence upon the system. Regard, however, must always be had to the state of the weather; and to a damp condition of the atmosphere the infant should never be exposed, as it is one of the most powerful exciting causes of consumptive disease. The nurse-maid, too, should not be allowed to loiter and linger about, thus exposing the infant unnecessarily, and for an undue length of time; this is generally the source of all the evils which accrue from taking the babe into the open air.

Exercise, also, like air, is essentially important to the health of the infant. Its first exercise, of course, will be in the nurse's arms. After a month or two, when it begins to sleep less during the day, it will delight to roll and kick about on the sofa: it will thus use its limbs freely; and this, with carrying out into the open air, is all the exercise it requires at this period. By and by, however, the child will make its first attempts to walk. Now it is important

that none of the many plans which have been devised to teach a child to walk, should be adopted — the go-cart, leading-strings, &c.; their tendency is mischievous; and flatness of the chest, confined lungs, distorted spine, and deformed legs, are so many evils which often originate in such practices. This is explained by the fact of the bones in infancy being comparatively soft and pliable, and if prematurely subjected by these contrivances to carry the weight of the body, they yield just like an elastic stick bending under a weight, and as a natural consequence become curved and distorted.

It is highly necessary that the young and experienced mother should recollect this fact, for the early efforts of the little one to walk are naturally viewed by her with so much delight, that she will be apt to encourage and prolong its attempts, without any thought of the mischief which they may occasion; thus many a parent has had to mourn over the deformity which she has herself created.

It may be as well here to remark, that if such distortion is timely noticed, it is capable of cor-

rection, even after evident curvature has taken place. It is to be remedied by using those means that shall invigorate the frame, and promote the child's general health (a daily plunge into the cold bath, or sponging with cold salt water, will be found signally efficacious), and by avoiding the original cause of the distortion — never allowing the child to get upon his feet. The only way to accomplish the latter intention, is to put both the legs into a large stocking; this will effectually answer this purpose, while, at the same time, it does not prevent the free and full exercise of the muscles of the legs. After some months pursuing this plan, the limbs will be found no longer deformed, the bones to have acquired firmness and the muscles strength; and the child may be permitted to get upon his feet again without any hazard of perpetuating or renewing the evil.

The best mode of teaching a child to walk, is to let it teach itself, and this it will do readily enough. It will first crawl about: this exercises every muscle in the body, does not fatigue the child, throws no weight upon the bones, but

imparts vigour and strength, and is thus highly useful. After a while, having the power, it will wish to do more: it will endeavour to lift itself upon its feet by the aid of a chair, and though it fail again and again in its attempts, it will still persevere until it accomplish it. By this it learns, first, to raise itself from the floor; and secondly, to stand, but not without keeping hold of the object on which it has seized. Next it will balance itself without holding, and will proudly and laughingly show that it can stand alone. Fearful, however, as yet of moving its limbs without support, it will seize a chair or anything else near it, when it will dare to advance as far as the limits of its support will permit. This little adventure will be repeated day after day with increased exultation; when, after numerous trials, he will feel confident of his power to balance himself, and he will run alone. Now time is required for this gradual self-teaching, during which the muscles and bones become strengthened; and when at last called upon to sustain the weight of the body, are fully capable of doing so.

In Childhood. — When the child has acquired sufficient strength to take active exercise, he can scarcely be too much in the open air; the more he is habituated to this, the more capable will he be of bearing the vicissitudes of the climate. Children, too, should always be allowed to amuse themselves at pleasure, for they will generally take that kind and degree of exercise which is best calculated to promote the growth and development of the body. In the unrestrained indulgence of their youthful sports, every muscle of the body comes in for its share of active exercise; and free growth, vigour, and health are the result.

If, however, a child is delicate and strumous, and too feeble to take sufficient exercise on foot,—and to such a constitution the respiration of a pure air and exercise are indispensable for the improvement of health, and without them all other efforts will fail, — riding on a donkey or pony forms the best substitute. This kind of exercise will always be found of infinite service to delicate children; it amuses the mind, and exercises the muscles of the whole

body, and yet in so gentle a manner as to induce little fatigue.

The exercises of horseback, however, are most particularly useful where there is a tendency in the constitution to pulmonary consumption, either from hereditary or accidental causes. It is here beneficial, as well through its influence on the general health, as more directly on the lungs themselves. There can be no doubt that the lungs, like the muscles of the body, acquire power and health of function by exercise. Now during a ride this is obtained, and without much fatigue to the body. The free and equable expansion of the lungs by full inspiration, necessarily takes place; this maintains their healthy structure, by keeping all the air-passages open and pervious; it prevents congestion in the pulmonary circulation, and at the same time provides more completely for the necessary chemical action on the blood, by changing, at each act of respiration, a sufficient proportion of the whole air contained in the lungs, — all objects of great importance, and all capable of being promoted, more or less, by the means in question.

And be it remembered that these remarks apply with equal force to the girl as to the boy. She should be allowed, and even encouraged, to take the same active exercise. Fortunately, this course is followed during childhood; not so, unfortunately (in the majority of cases, at least), after this period. Young females are then subjected to those unnatural restraints, both in exercise and dress, which fashion and vanity impose, to be followed by effects which, though not immediately obvious, are capable of laying the foundation of evils that cannot afterwards be remedied.

A good carriage is the point aimed at (and to which I particularly refer), and the means adopted for its cultivation fail, after all, in their end, just in proportion to their rigid employment. For this purpose the head is kept erect, and the shoulders drawn back, and they are to be kept in this position not for an hour or so, but continually. To preserve, however, this unnatural and constrained position, requires considerable muscular powers, such as no girl can exercise without long, painful, and injurious training; nor even by this, unless other mea-

sures be resorted to in aid of her direct endeavours. For instead of the muscles obtaining increased power and strength by these efforts (to enforce a good carriage), they are enfeebled, and soon become more and more incapable of performing what is required of them. This fact soon becomes perceptible; weakness is noticed; but instead of correcting this by the only rational mode, that of invigorating the weakened muscles, mechanical aid is called in to support them, and laced waistcoats are resorted to. These undoubtedly give support — nay, they may be so used as almost wholly to supersede the muscular efforts, with the advantage of not tiring, however long or continuously employed. Improvement of carriage is manifested, the child is sensible of relief from a painful exertion, the mother is pleased with the success of her management, and this success appears to superficial observation fully to confirm the judgment which superintends it. Yet what are the consequences to which her measures tend, and which such measures are daily and hourly producing? The muscles of the back and chest, restrained in their natural and

healthful exercise by the waistcoat called in to aid them, and more signally, in after-life, by the tightly-laced stays or corsets, become attenuated, and still further enfeebled, until at length they are wholly dependent on the mechanical aid, being quite incapable of dispensing with it for any continuance.

By and by a taper waist becomes an object of ambition, and the stays are laced more closely than ever. This is still done gradually, and, at first, imperceptibly to the parties. The effect, however, though slow, is sure; and the powers of endurance thus exercised come in time to bear, almost unconsciously, what, if suddenly or quickly attempted, no heroism could possibly sustain. This increased pressure impedes the motion of the ribs. For perfect respiration these motions should be free and unrestrained, and perfect respiration is necessary to those changes in the blood which fit it for nutrition, and the other purposes of the animal frame. In proportion as respiration is impeded, is the blood imperfectly vitalised, and in the same ratio are the nutrient and other functions dependent on the blood inade-

quately performed. Here, then, is one source of debility, which affects the whole frame, reducing every part below the standard of healthful vigour. Quickened respiration soon ensues, the heart becomes excited, the pulse accelerated, and palpitation is in time superadded.

There are still further evils produced by tight lacing. For the pressure being chiefly made on the lower part of the chest, the stomach and liver are necessarily compressed, to the great disturbance of their functions; and being pressed downwards too, these trespass on that space which the other abdominal viscera require, superinducing still further derangements. Thus almost every function of the body becomes more or less impeded.

And again, the girl not being able always to have her body cased in the tight-laced stays, some relaxation must take place. Under it the muscles of the back, deprived of their accustomed support, and incapable of themselves to sustain the incumbent weight, yield, and the column of the spine bends, at first anteriorly, causing round shoulders and an arched back; but event-

ually inclines to one or other side, giving rise to the well-known and too frequently occurring state of lateral curvature. This last change most frequently commences in the sitting posture, such females being, through general debility, much disposed to sedentary habits. Such, though but very slightly sketched, are a few of the evils attending this baneful practice.

But how, then, is a good carriage to be obtained; which is not only pleasing to the eye, but is, when natural, absolutely conducive itself to health? To insure a good carriage, the only rational way is to give the necessary power, especially to the muscles chiefly concerned; and this is to be done, not by wearying those muscles by continual and unrelieved exertion, but by invigorating the frame generally, and more especially by strengthening the particular muscles through varied exercise alternated with due repose. Attention to general health, suitable diet, regular bowels, moderate but regular exercise, not of particular muscles only, but of the whole frame, cold-bathing or sponging, and other such measures, will maintain a good car-

riage, by giving that power which the more direct means so generally practised serve but to exhaust.*

* The above remarks on "good carriage" are almost wholly taken from a valuable article of Dr. Barlow's, in the "Cyclopædia of Practical Medicine."

CHAP. II.

ON THE USE AND ABUSE OF CERTAIN REMEDIES.

SECT. I. — APERIENT MEDICINE.

One of the greatest errors of the nursery is the too frequent and indiscriminate exhibition by the mother or nurse of purgative medicine to the infant. Various are the forms in which it is given; perhaps the little powders obtained from the chemist is the most frequent, as it is certainly the most injurious, form, their chief ingredient being calomel.

The choice of the aperient, or the dose, or the exact condition of the health of the infant, or whether it is an aperient at all that is required, are points entirely overlooked: a little medicine is thought necessary, because the child appears unwell, and a purgative, or a little white powder, is forthwith given. The great art of

medicine is the proper application of the proper medicine, in the proper dose, at the proper time; points never considered in the nursery. For example, I have known a large dose of magnesia given by a nurse to an infant, that had been suffering from a diarrhœa of some days' standing, and very quickly cause death. Now, magnesia is one of the most useful and harmless medicines that can be given to an infant when indicated; when prescribed in a dose suited to its age, and when the proper time is fixed upon for its exhibition; in the foregoing case, however, every thing forbad its use, but none of these points were considered.

Aperient medicine, too, is sometimes unwittingly repeated to remove those symptoms which it has itself produced. Some incidental pain and uneasiness, some slightly greenish appearance of the motions, leads the mother to believe that more purging is necessary, when, in fact, both circumstances have probably been induced by the irritation caused by the purgatives already too freely administered. How frequently is this the case, during the first week or ten days of the infant's life, when the nurse doses the child

with tea-spoonful after tea-spoonful of castor oil, for the relief of pain, which her repeated doses of medicine have alone created.

The bowels of an infant in health should be relieved two, three, or four times in the twenty-four hours. The stools should be of the consistence of thin mustard, and of a lightish yellow colour, having little smell, free from lumps or white curdy matter, and passed without pain, or any considerable quantity of wind. And a parent is only justified in giving aperient medicine, when any deviation from these conditions exists; and only then, when what may be called healthy costiveness is present, viz. either the stools less frequent than they ought to be, or lumpy and partially solid. Then, the only purgative medicines that can be given with safety to an infant, without medical sanction, are, castor oil, manna, rhubarb, and magnesia; the application of the lavement, and the aperient liniment.

Castor Oil.

This is one of the mildest aperients, prompt in its action, and effective in clearing out the

contents of the bowels; it is a medicine, therefore, particularly applicable to infants.

During teething there is generally much torpor of the bowels; here, then, castor oil is a very appropriate and useful artificial means of increasing the frequency of the alvine discharges.

Then, again, no purgative can be so much relied on for overcoming habitual costiveness as castor oil; it may for this purpose be given daily for some weeks, gradually reducing the dose until only a few drops be taken; after which the bowels generally continue to act without further artificial assistance. Even its occasional administration leaves the bowels in a relaxed state; a great advantage over other purgatives, which generally cause, after their action is passed off, a confined state.

The proper dose will depend upon the age, and the known effect of aperient medicine upon the child—some requiring more, others less:—

Under one year, one small tea-spoonful.

Under three years, two ditto.

Under six years, three ditto.

Under ten years and upwards, a table spoonful. The quantity being more or less accord-

ing to the facility with which the bowels are purged.

It may be given in various ways; poured upon a little mint water, or blended with a little moist sugar; — or, if the stomach is unusually delicate, the oil may be made into an emulsion with some aromatic water, by the intervention of the yolk of an egg and a little syrup of roses or sugar combined with it. The following proportions make an elegant and not at all a disagreeable mixture, of which a desert-spoonful (or more, according to the age,) may be repeated every hour until it operate:—

Castor oil, six drachms;
The yolk of an egg;
Mix well together, and add
Dill water, two ounces,
Syrup of roses, two drachms.

Manna.

This also may be given with impunity to the youngest infant; it is sweet to the taste, and mild in its operation. It should be exhibited

in doses of one to two drachms in a little warm milk; or if it cause flatulence in this form, in some aromatic water, a desert spoonful of carraway-seed or dill water. For children above two years, it must always be given with some other aperient: thus, it may be combined with castor oil by the medium of mucilage or the yolk of an egg; in fact, it might be substituted for the syrup of roses in the previous prescription for castor oil.

Magnesia and Rhubarb.

Magnesia, besides being a laxative, allays irritability of the stomach; it is consequently useful during dentition, at which period there is both much irritability and a prevailing acescency of the stomach. The dose is from five grains to ten for an infant, increasing the quantity to fifteen grains or twenty to children of nine or ten years of age. When taken alone the best vehicle is hot milk, which greatly quickens its aperient operation. And whenever the bowels are distended with wind, the pure magnesia is preferable to the carbonate.

It is well to mention here, that when the infant throws up the nurse's milk it is generally curdled; a fact which leads the inexperienced mother to infer that the child is suffering from acidity; and to counteract the supposed evil magnesia is given again and again. This is a useless and pernicious practice, for curdling or coagulation of the milk always takes place in the stomach, and is produced by the gastric juice, and is so far from being a morbid process, that milk cannot be properly digested without it.

Rhubarb, it should always be recollected, has an astringent as well as purgative property, according to the extent of the dose in which it is administered; the former of which never opposes or interferes with the energy of the latter, since it only takes effect when the substance is administered in small doses, or, if given in larger ones, not until it has ceased to operate as a cathartic. This latter circumstance renders it particularly eligible in cases of diarrhœa, as it evacuates the offending matter before it operates as an astringent upon the bowels.

As a purgative it operates mildly, and may

be given to the youngest infant; if from two to twelve months old, from three to six grains; for children above that age, the dose may range from ten grains to twenty. Its operation, however, is much quickened by the addition of magnesia; both of which are more effective when thus united than when given separately. The following form, in a costive and flatulent state of the bowels, will be found useful *; a tea-spoonful or more may be given every three or four hours until the desired effect is obtained: —

Powdered rhubarb, half a drachm;
Magnesia, two scruples;
Compound spirits of ammonia, twenty drops;
Dill water, two ounces;
Simple syrup, two drachms.

Rhubarb, mixed with flour and warm water, may be made into a poultice, and applied to the abdomen of a child that obstinately refuses to swallow medicine, and it will be found to produce the same effect as if the medicine had been taken into the stomach; it will purge briskly.

* This may be made up and kept in the nursery for a long time without spoiling.

The Lavement.

This is an excellent nursery remedy when the bowels are obstinately costive. It may then be employed as a substitute for medicine, a protracted and frequent use of which (even of the mildest aperients) is apt to injure the digestive functions, and to give rise to some degree of intestinal irritation. Lavements, however, like aperient medicine, must not be resorted to for a long time together; for whilst the latter irritate, the former most certainly tend, after a long continued use, to debilitate the bowels, and thus render them less than ever disposed to act for themselves. They are an excellent *occasional* remedy.

The simplest form of an aperient enema, is warm water; but barley-water, or thin gruel, or even milk and water, are to be preferred at all times, as they are of a more bland and less irritating nature. If it be desirable to increase the strength of the injection, castor oil may be added. The proportions of fluid which are necessary for the different stages of life, under ordinary circumstances, may be stated

as follows: — An infant at its birth requires about one fluid ounce; a child between the age of one and five years, from three to four fluid ounces; and a youth of ten or fifteen, from six to eight fluid ounces.

The mode of administering an injection to an infant deserves particular attention, as injury might be caused by its being performed in a careless or unskilful manner. A gum elastic pipe should be always used instead of the hard ivory tube. Having smeared this over with lard, and placed the infant on its left side, with its knees bent up in the lap of the nurse, it is to be passed a couple of inches into the bowel, in a direction not parallel to the axis of the body, but rather inclined to the left. The latter circumstance should never be neglected, for if not attended to, there will be difficulty in administering the injection. The fluid must then be propelled very gradually, or it will be instantly rejected; on the whole being thrown up (the pipe carefully and slowly withdrawn), the child must be kept quietly reposing on its nurse's lap, and in the same posture for some little time.

The Aperient Liniment.

A liniment to be rubbed on the stomach is another resource in cases of habitual costiveness, and will frequently be attended with great success when repeated purgatives have been resisted.

Olive or castor oil may be used for this purpose; they must be warmed and rubbed over the abdomen night and morning, for five or ten minutes. Perhaps the best form of liniment that can be made use of is the following: —

Compound soap liniment, one ounce;
Compound tincture of aloes, half an ounce.

SECT. II. — CALOMEL.

Calomel is one of the most useful medicines we possess; but though powerful for good, it is by no means powerless for mischief, and pages might be written upon the evil effects which

have resulted from its indiscriminate use in the nursery; medical men are daily and hourly witnessing this fact. It is particularly eligible in the diseases of children; but then it is quite impossible for unprofessional persons to judge when it may be appropriately exhibited. And it cannot be too generally known, that the effect of this medicine upon the evacuations is always to make them appear unnatural. From ignorance of this fact, calomel is often repeated again and again to relieve that very condition which it has itself produced, causing, but too frequently, a degree of irritation in the delicate lining membrane of the bowel, which it may be very difficult for a medical man to remove, and perhaps a source of misery to the child as long as it lives.

Its frequent exhibition has also another evil attending it, for "the immoderate use of mercury in early infancy produces more, perhaps, than any other similar cause, that universal tendency to decay, which, in many instances, destroys almost every tooth at an early age."*

* Bell on the Teeth.

In the diseases of childhood it is often administered by the mother or nurse with a degree of careless excess which ultimately, if not immediately, produces severe and irremediable injury. I have met with such cases; but Mr. Bell details a remarkable instance in point: "A child, about three years of age, was brought to me, having a most extensive ulceration in the gum of the lower jaw, by which the alveolar process (that portion of the jaw which forms the sockets of the teeth) was partially denuded. The account given by the mother was, that the child had some time previously been the subject of measles, for which a chemist, whom she consulted, gave her *white powders*, one of which was ordered to be taken every *four hours*. It appears by the result, that this must have been calomel; for, after taking it for two or three days, profuse salivation was produced, with swollen tongue, inflamed gums, &c., followed by ulceration of the gum, lips, and cheek. On examining the denuded alveolar process, I found that a considerable necrosis (death of the bone) had taken place, including the whole anterior arch of the jaw from the first double tooth on the left side

to the eye-tooth on the right. By degrees the dead portion of bone was raised, and became loose, when I found that the mischief was not confined to the alveolar process, but comprised the whole substance of the bone within the space just mentioned," &c. Surely the knowledge of such a case as this would induce every prudent mother to *exclude calomel from her list of domestic nursery medicines.*

SECT. III. — OPIATES.

This class of medicine is often kept in the nursery, in the forms of laudanum, syrup of white poppies, Dalby's carminative, and Godfrey's cordial.

The object with which they are generally given is to allay pain by producing sleep; they are, therefore, *remedies of great convenience to the nurse;* and I am sorry to be obliged to add, that, so exhibited, they are but *too often fatal to the little patient.*

The fact is, that in the hands of the physician, there is no medicine the administration of which requires greater caution and judgment than

opiates, both from the susceptibility of infants to their narcotic influence, and their varying capability of bearing it; the danger, therefore, with which their use is fraught in the hands of a nurse should for ever exclude them from the list of domestic nursery medicines.

Dalby's carminative and Godfrey's cordial are, perhaps, more frequently used than any other forms; and some striking cases, illustrative of the fatal results of exhibiting them indiscriminately, and without medical sanction, are on record.* The late Dr. Clark, in his "Commentaries," mentions a case which he saw, where "*forty drops of Dalby's carminative* destroyed an infant." Dr. Merriman gives the following in a note in Underwood, "On the Diseases of Children:"—

"A woman, living near Fitzroy Square, thinking her child not quite well, gave it a dose of Godfrey's cordial, which she purchased at a chemist's in the neighbourhood. In a very short time after taking it the child fell into convulsions, and soon died. In less than a month

* Two or three fatal cases, and upon which coroners' inquests were held, have occurred within the last two years.

the child of another woman in the same house was found to be ill with disordered bowels. The first woman, not at all suspecting that the Godfrey's cordial had produced the convulsions in her infant, persuaded her friend to give the same medicine to her child. A dose from the same bottle was given, and this child was likewise attacked almost immediately with convulsions, and also died."

Convulsions and epilepsy, without such fatal results as the foregoing, are not uncommon as the effect of a single dose of an opiate given unadvisedly; and by their continued and habitual use (and the form of syrup of poppies is but too often administered by an indiscreet and lazy nurse, unknown by the parent), a low, irritative, febrile state is produced, gradually followed by loss of flesh, the countenance becoming pallid, sallow, and sunken, the eyes red and swollen, and the expression stupid and heavy, and the powers of the constitution at last becoming completely undermined. Such an object is to be seen daily among the poorer classes, — the miniature of a sickly aged person: death soon follows here.

SECT. IV. — LEECHING.

Difficulty sometimes arises in putting a stop to the bleeding from leech-bites; a matter of considerable importance in the case of a delicate infant. The following measures may be resorted to for this purpose: —

1. Expose the surface of the part to the external air, so that a coagulum of blood may form at the orifice: this simple mode will frequently arrest it.

2. If this fail, make compression upon the part: this is one of the most effectual means of restraining hæmorrhage. It is to be effected by taking a piece of lint folded three or four thicknesses, and the size of the finger-nail, to be steadily pressed upon the open orifice with the point of the finger until the blood has ceased to flow. The pledget of lint, however, must not be removed for some hours afterwards, or the bleeding will break out afresh.

3. If the compression fails in stopping the bleeding, or from the situation of the leech-

bites it cannot be adopted, because there is no firm point of resistance upon which to make pressure, the part may be dusted with starch or gum arabic powder, or, if this is of no avail, the wound may be touched with lunar caustic.

If none of these measures are successful, the assistance of the medical attendant must be obtained; and if firm pressure be made upon the part, no serious loss of blood can ensue before his arrival.

Leeches should never be resorted to by a parent for any of the diseases of infancy, without medical direction.

SECT. V. — BLISTERS AND POULTICES.

A blister should never be applied for any infantile disease, except when ordered by a medical man, as its injudicious use might greatly aggravate the complaint.

There are also *one or two precautions* in reference to *the mode of the application* of a blister, which it is always right for a parent to attend to. From the great irritability of the skin, it

should never be allowed to remain on longer than from two to four hours. At the expiration of this time, the surface will usually become red and inflamed; and, if the blister is removed, and the part dressed with fresh spermaceti ointment spread on lint, or with a soft bread and water poultice, a full blister will soon be raised: the little patient is thus saved much suffering, and a very troublesome sore prevented. A piece of tissue or silver paper, interposed between the blister and the skin, will answer the same purpose; the blister will act well, and the evils before alluded to will be prevented.

After a blister has been two or three hours applied, its edge should be carefully raised, to ascertain the effect produced; and if the surface be much inflamed, more particularly if little points of vesication (watery bladders) are present, it should be removed, and the above directions attended to.

Mustard poultices are invaluable in some of the diseases of infancy and childhood, and therefore frequently ordered.

A mustard poultice is made by mixing two

thirds of mustard flour and one third of wheaten flour with warm water or vinegar, in sufficient quantity to render the powder of the consistence of paste. It is then spread on linen from the size of a half-crown to that of the palm of the hand, according to the effect intended, and placed on the skin. How long it is to be kept on will depend upon the individual sensibility of the skin of the child; but, in general, from fifteen to twenty minutes will be found amply sufficient. The application, however, must at all times be carefully watched; for if it remain on too long, ulceration, and death of the part, might ensue; therefore, directly the skin is found tolerably red, the poultice should be removed. After its removal, the part may be exposed, or, if very painful, smeared over with fresh cream or common cerate.

A bread and water poultice, although one of the commonest applications in use, is rarely well made or properly applied. It thus becomes injurious rather than useful; adding to the inflammation or irritation of the part, instead of soothing and allaying it. Nothing, however, is more simple than the mode of its preparation.

Cut slices of stale bread of sufficient quantity, scald out a bason, put the bread into it, pour upon it boiling water, cover it over, and let it stand for ten minutes; next strain the water off, gently squeeze the saturated bread in a thin cloth, so that the poultice shall not be too moist, and then spread it upon a cloth so that it shall be in thickness half an inch, and of a size large enough to cover the whole of the inflamed part, and a little more. Apply it just warm enough to be borne, and cover it well with oiled silk. A poultice thus made, will act as a local tepid bath to the inflamed part; and the oiled silk preventing evaporation, it will be found, when taken off, as moist as the first moment that it was put on.

SECT. VI. — BATHS.

Baths are much resorted to during infancy and childhood, both in health and in disease. In the former state, they constitute an important measure of hygeiene (this has been briefly al-

luded to under the section "Bathing"), and in the latter, a valuable remedial agent. Their indiscriminate use, however, might be followed by serious consequences; it is therefore important to point out a few rules for their judicious employment.

The Cold Water Plunge Bath.

It consists of water in its natural degree of heat; its temperature varying, according to the season of the year or other circumstances, from 30° to 60°.

The phenomena produced upon a strong and healthy boy plunging into this bath will be as follows: — He will first experience a sensation of cold, followed by slight shuddering, and, if the immersion has been sudden, a peculiar impression in the nervous system, called a shock. Almost immediately after the shock, the feeling of cold will vanish, and give place to a sensation of warmth, speedily diffusing itself over the whole frame. If the boy leaves the bath at this time, or, at all events, before the warmth of the

body goes off, and quickly dresses himself, a renewal of the reaction which had followed the shock of immersion will be experienced; he will be in a most delightful glow,—there will be a general feeling of enjoyment, accompanied by a sensible increase of animal power, and invigoration of the whole system. But, on the other hand, if the boy greatly prolong his stay in the water, no reaction will ensue, and he will become chilly, which will gradually increase to a strong and general shivering;—his feet and legs will become benumbed, and the whole body will soon be languid, exhausted, and powerless. The same result will happen to the young and delicate infant, if plunged into this bath; the same sensations will be produced; except that here the shock is scarcely followed by any reaction, and therefore from the first moment of the immersion, the shivering and consequent train of sensations occur. This arises from the infant at birth having less power of producing heat than when further advanced in age.

From the foregoing remarks, then, it will be seen, that, *in early infancy*, the cold bath is inadmissible, and water of a higher temperature

than that which feels cool to the hand of the nurse should always be used at this age. But that, as the child grows older, — if of a healthy and vigorous constitution, — the cold bath is unquestionably most desirable; and, if used in a proper manner, will be found to act as a most powerful tonic to the system. The summer is of course the only period of the year when the cold plunging bath can be resorted to for the child.

Sea Bathing.

When sea bathing can be obtained, it is even more conducive to the health of the child than the fresh water plunge bath; for the sea water is more tonic, stimulant, and bracing, than fresh. The period of the year best adapted for sea bathing is the summer and autumn. The best time of the day for bathing is two or three hours after breakfast; except in very hot weather, when an earlier hour must be chosen. Exercise is always useful previously to the bath; but it must be gentle, so as not to induce fatigue or much perspiration. Then the bath must be

entered suddenly, with a plunge, inasmuch as an instantaneous immersion produces a greater reaction than a gradual immersion.* The length of time of remaining in will depend upon circumstances. One dip only is enough at the first bath. Subsequently the time of remaining in the water may be prolonged, but this must be increased gradually; the positive necessity of leaving the bath while there still remains sufficient power of reaction being always kept in mind. Exercise in the water, particularly that of swimming, is highly useful. The body should be speedily and well dried, immediately upon coming out; a rough jack towel is an excellent means of accomplishing this purpose, while at the same time it insures considerable friction of the surface of the skin. If the boy is in sound health, he may bathe daily.

As a remedy, sea bathing is highly serviceable. Its employment, however, requires much caution, and great mischief is sometimes committed by its indiscriminate use.

* It is a matter of importance in bathing children, that they should not be terrified by the immersion, and every precaution should be taken to prevent this.

The child of a strumous habit may be greatly benefited by sea bathing, united with a few years' residence on the coast. Indeed, by carefully following up a course of sea bathing, a suitable diet, and a judicious mode of living, the very temperament of the individual may be all but changed, and a power and activity imparted to the system, productive eventually of comparatively strong and robust health. A parent will do wisely, therefore, to send a child of such a habit to a school on the coast. Great caution, however, must be observed when bathing is commenced, lest the shock be too powerful for the energies of the system, and be not followed by the necessary degree of reaction. It will be prudent to begin with the tepid bath (85° to 92°), and gradually reduce the temperature until the open sea can be resorted to without fear. The measures already mentioned for promoting reaction — exercise previous to immersion; the immersion at first only momentary, and followed by strong friction — must be diligently regarded in such a case.

In the child of a delicate and feeble habit, much out of health, whose general debility is depend-

ent on some organic disease, sea bathing is not only improper, but dangerous. Instead of being strengthened, such a child will be rendered more weak and debilitated. On the other hand, when the child is of a weak and relaxed habit, but free from organic disease, the cold bath will be highly useful, provided sufficient power of reaction exist in the system. In this case the skin and flesh of the child is relaxed and flabby; there is a great tendency to warm perspirations in bed, capricious appetite, confined or relaxed bowels, indisposition to exertion, and weariness from the slightest effort.

The Shower Bath.

The effects of the shower bath are, on the whole, similar to those of the plunge bath of the same degree of temperature, except that the immediate shock of the shower bath is in general felt to be greater than that from simple immersion. This, however, may be met by putting warm water into the bottom of the bath in sufficient quantity to cover the ankles of the indi-

vidual taking the bath, which tends at once to lessen the shock, and to increase the reaction.

The apprehension and alarm experienced by young children in entering this kind of bath is easily overcome, by using at first a modification of it, lately brought into use. It consists of a tin vessel in the form of a large bottle, pierced at the bottom like a colander, and terminating in the upper part in a narrow tube, with an open mouth. When put into water it becomes filled, which is retained by closing the mouth of the tube with the finger; on removing which the water flows gradually out of the sieve-like bottom in a gentle shower. This may be used to the youngest child. At first the quantity of water employed should be small, and its temperature warm; as, however, the child grows older and accustomed to the bath, the former may be increased, and the latter lowered. Its tonic effect may be augmented by the addition of bay salt, and by much active rubbing.

As the child gets older the common form of shower bath may be used, and throughout the year, if he enjoy robust health; during the winter season, however, the water should be made

tepid. This bath should be taken immediately upon rising from bed.

Ablution, or Sponging.

By ablution is meant the process of applying water to the surface of the body by means of a sponge or towel. It is one of the best substitutes for the cold bath; and if done quickly and thoroughly, produces a glow and invigoration of frame almost equal to the former. It is also the surest preventive against catching cold.

Every child in health ought to be obliged, every morning of its life (when other means of bathing cannot be obtained), upon rising, and while the body still retains all the warmth of the bed, to sponge the whole body. If too young to do it for himself, it must be done for him. Salt or vinegar should be added to the water; and if the boy be robust, cold water may be used throughout the year; if not, in the winter season it must be made tepid.

As a remedy, cold water sponging, and the

application of ice and iced water, are often ordered under certain states of disease by the medical attendant, and frequently followed by delightful results. But it is necessary that they should be properly applied to do good.

Cold water sponging is a convenient and grateful method of moderating febrile heat of the surface, provided undoubted powers of reaction be present in the system. It is frequently ordered, therefore, to be employed in eruptive fevers, as measles, scarlet fever, smallpox, and other fevers; and also in some local inflammations, particularly of the brain. Vinegar may be added to the water under these circumstances with advantage. It should at first be used tepid or cool, but afterwards cold. As a general rule, the more dry and parched the heat of the surface, the more urgent the necessity for the application of the cold, and the more frequently and fearlessly ought it to be renewed, — every hour or half-hour not being too often. Should the child fall asleep during the process, and begin to perspire, it must be intermitted, but resumed again on a recurrence of the parching heat.

Ice and iced water are most frequently employed in affections of the brain. The former is most conveniently applied in a well-cleaned pig's bladder, which should be half filled with broken fragments of the ice. The bladder prevents moisture about the clothes, and, from its smooth and pliant nature, readily accommodates itself to every part of the child's head. If iced water is used, care must be taken that the cloths are sufficiently large to cover the whole of the head, and they should be doubled to prevent their getting rapidly warm. Indeed, in applying cold locally, as in inflammation of the brain, one rule it is of the utmost importance to observe, viz. that the application of the cold shall be continuous; therefore a second set of cold cloths or bags of ice should be applied before the former has become warm. This plan, especially pursued during the night, along with judicious internal treatment, will save many children from perishing under the most insidious and fatal disease of childhood — water on the brain.

If neither water of a sufficiently low temperature, nor ice, can be procured, then recourse

may be had to refrigerating mixtures, of which the following is a good form: —

Common water, five pints;
Vinegar, two pints;
Nitre, eight ounces;
Sal ammoniac, four ounces.

The Warm Bath.

The warm bath judiciously prescribed is one f the most valuable remedial agents we possess; but although powerful for good, when misapplied, it is equally powerful for mischief. For instance, in active inflammatory affections, before the loss of blood, the use of the warm bath would greatly aggravate the disease; and yet, for an infant with active inflammation of the respiratory organs, it is continually resorted to. Again, nothing is more common than for a child, when attacked with convulsions, to be put immediately in the warm bath; and, generally speaking, it is extremely beneficial in this class of diseases; but it is sometimes no less prejudicial, when applied without due examination of

the peculiarities of individual cases. For, in plethoric and gross children, the local abstraction of blood from the head, and the complete unloading of the alimentary canal, are often necessary to render such a measure beneficial, or even free from danger. In convulsions, however, and particularly when arising from teething, a parent may, without hesitation, at any time immerse the *feet* of the infant in water as warm as can be borne, at the same time that cloths wet with cold water are applied to the head and temples.

As a preventive, where there is a tendency to disease, the warm bath may be employed without scruple, and will be found most serviceable. Its value in this point of view is very great, and it is to be regretted that it is not sufficiently appreciated and used. For example, a severe cold has been taken, and inflammation of the air-tubes is threatened: only put the child into a warm bath, and, with the common domestic remedies, a very serious attack may be warded off. Again, in the commencement of a diarrhœa, a warm bath, and discontinuing the cause of the attack, will alone suffice to cure; and, more-

over, in the protracted diarrhœa attendant upon teething, where, after various remedies have been tried in vain, the child has lost flesh and strength to an apparently hopeless degree, recovery has been brought about by the simple use of the warm bath.

In the treatment of scrofulous children, warm and tepid bathing is of great value. In such cases, a course of warm sea bathing, with active friction over the whole surface after each bath, will at once relieve that abdominal fulness which is generally present, improve the functions of the skin, and give tone and vigour to the whole system. Towards the termination of such a course of baths, their temperature must be gradually reduced till they become tepid (85° to 92°).

The opinion that warm baths generally relax is erroneous: they are, no doubt, debilitating when used by persons of a weak and relaxed constitution, or when continued too long; but, on the contrary, they invariably give tone when employed in the cases to which they are properly applicable.

A partial warm bath, such as the foot-bath, is

of much service in warding off many complaints. If a child get the feet wet, plunging them into warm water will often prevent any ill consequences; and even when the first chill and slight shiverings which usher in colds, fevers, and other inflammatory complaints, have been complained of, the disease may be cut short by the use of a foot-bath, continued till free perspiration occurs.

Rules for the Use of the Warm Bath.

Temperature of the water. — When the warm bath is used as a measure of hygeiene, as a general rule, any degree of temperature may be chosen between 92° and 98°, which appears to be most agreeable to the child; but on no account must 98° be exceeded. When ordered as a remedial measure, the temperature will of course be fixed by the medical attendant.

The same degree of temperature must be kept up during the whole period of immersion. For this purpose the thermometer must be kept in the bath, and additions of warm water made as the temperature is found to decrease. These

additions of warm water, however, must be regulated by the indications of the thermometer, and not by the feelings of the child.

Period of remaining in the bath. — This must depend upon circumstances. As *a measure of hygeiene*, it must be varied according to the age of the child. For the first four or five weeks, the infant should not be kept in beyond three or four minutes; and the duration must afterwards be gradually prolonged as the child advances in age, until it extends to a quarter of an hour, — a period which may be allowed after it has attained the age of four years.

When the bath is employed as *a remedial agent*, the time of immersion must be prolonged; this will be determined by the medical adviser. Speaking generally, a quarter of an hour may be said to be the shortest period, an hour the longest, and half an hour the medium.

When in the bath, care must be taken that the child's body is immersed up to the shoulders or neck, otherwise that part of the body which is out of the bath (the shoulders, arms, and chest), being exposed to the cooler temperature of the air, will be chilled.

When the infant or child is taken out of the bath, the general surface, especially the feet, must be carefully rubbed dry with towels previously warmed; and when one of the objects of the bath is to excite much perspiration, the child should be immediately wrapped in flannel and put to bed. When, however, the object is not to excite perspiration, the child may be dressed in his ordinary clothing, but should not be allowed to expose himself to the open air for at least an hour.

Time of using the bath. — When resorted to for sudden illness, the bath must of course be employed at any time needed. When used for any complaint of long standing, or a measure of hygeiene, as a general rule, it should be taken between breakfast and dinner, about two hours after the former, or an hour and a half before the latter. This implies that the infant should never be put into the bath after having been freely nourished at the breast. Neither should it ever be used when the child is in a state of free perspiration from exercise, or on awaking from sleep.

CHAP. III.

OF TEETHING, AND HINTS ON THE PERMANENT OR ADULT TEETH.

The infant at birth has no teeth visible: the mouth is toothless. It possesses, however, hidden in the jaw, the rudiments of two sets. The first of these which makes its appearance, are called the Temporary or Milk Teeth; the second, the Permanent or Adult Teeth, and these come up as the former fall out, and so gradually replace them.

SECT. I. — ON TEETHING.

The manner in which the temporary or milk-teeth appear. — The first set of teeth, or milk-teeth as they are called, are twenty in number;

they usually appear in pairs, and those of the lower jaw generally precede the corresponding ones of the upper. The first of the milk-teeth is generally cut about the sixth or seventh month, and the last of the set at various periods from the twentieth to the thirtieth months. Thus the whole period occupied by the first dentition may be estimated at from a year and a half to two years. The process varies, however, in different individuals, both as to its whole duration, and as to the periods and order in which the teeth make their appearance. It is unnecessary, however, to add more upon this point.

Their developement is a natural process. It is too frequently, however, rendered a painful and difficult one, by errors in the management of the regimen and health of the infant, previously to the coming of the teeth, and during the process itself.

Thus, chiefly in consequence of injudicious management, it is made the most critical period of childhood. Not that I believe the extent of mortality fairly traceable to it, is by any means so great as has been stated; for it is rated as

high as one sixth of all the children who undergo it. Still, no one doubts that first dentition is frequently a period of great danger to the infant. It therefore becomes a very important question to an anxious and affectionate mother, how the dangers and difficulties of teething can in any degree be diminished, or, if possible, altogether prevented. A few hints upon this subject, then, may be useful. I shall consider, first, the management of the infant, when teething is accomplished without difficulty;— and, secondly, the management of the infant when it is attended with difficulty.

Management of the Infant when Teething is without Difficulty.

In the child of a healthy constitution, which has been properly, that is, naturally, fed, upon the milk of its mother alone, the symptoms attending teething will be of the mildest kind, and the management of the infant most simple and easy.

Symptoms.—The symptoms of natural dentition (which this may be fairly called) are, an increased flow of saliva, with swelling and heat of the gums, and occasionally flushing of the cheeks. The child frequently thrusts its fingers, or any thing within its grasp, into its mouth. Its thirst is increased, and it takes the breast more frequently, though, from the tender state of the gums, for shorter periods than usual. It is fretful and restless; and sudden fits of crying and occasional starting from sleep, with a slight tendency to vomiting, and even looseness of the bowels, are not uncommon. Many of these symptoms often precede the appearance of the tooth by several weeks, and indicate that what is called "breeding the teeth" is going on. In such cases, the symptoms disappear in a few days, to recur again when the tooth approaches the surface of the gum.

Treatment.—The management of the infant in this case is very simple, and seldom calls for the interference of the medical attendant. The child ought to be much in the open air, and well exercised: the bowels should be kept freely

open with castor oil; and be always gently relaxed at this time. Cold sponging employed daily, and the surface of the body rubbed dry with as rough a flannel as the delicate skin of the child will bear; friction being very useful. The breast should be given often, but not for long at a time; the thirst will thus be allayed, the gums kept moist and relaxed, and their irritation soothed, without the stomach being overloaded. The mother must also carefully attend, at this time, to *her* own health and diet, and avoid all stimulant food or drinks.

From the moment dentition begins, pressure on the gums will be found to be agreeable to the child, by numbing the sensibility and dulling the pain. For this purpose coral is usually employed, or a piece of orris-root, or scraped liquorice root; a flat ivory ring, however, is far safer and better, for there is no danger of its being thrust into the eyes or nose. Gentle friction of the gums, also, by the finger of the nurse, is pleasing to the infant; and, as it seems to have some effect in allaying irritation, may be frequently resorted to. In France, and in this country also, it is very much the practice to dip the

liquorice-root, and other substances, into honey, or powdered sugar-candy; and in Germany, a small bag, containing a mixture of sugar and spices, is given to the infant to suck, whenever it is fretful and uneasy during teething. The constant use, however, of sweet and stimulating ingredients must do injury to the stomach, and renders their employment very objectionable.

The Management of the Infant in difficult Teething.

In the child which has been partly or altogether brought up by hand, or who is of a feeble and delicate constitution, or imbued with any hereditary taint, the process of dentition will be attended with more or less difficulty, and not unfrequently with danger.

Symptoms. — The symptoms of difficult dentition are of a much more aggravated description than those which attend the former case; and it is right that a mother should, to a certain extent, be acquainted with their character, that she

may early request that medical aid, which, if judiciously applied, will mitigate, and generally quickly remove them.

Difficult dentition will be attended with painful inflammation and swelling of the gum, which is hotter, of a deeper red, than natural, and intolerant of the slightest pressure. There is often great determination of blood to the head, which a mother may recognise by the cheeks being red, hot, and swollen; the eyes red, irritable, and watery; and the saliva running from the mouth profusely. The fever is great, and the thirst extreme. The child is at one time restless and irritable, and at another heavy and oppressed: the sleep will be broken, and the infant frequently awake suddenly and in alarm from its short slumbers. Such are the chief symptoms of difficult teething, and which will be present to a greater or less degree.

Treatment.—As most of the above symptoms are induced by the painful tension of the gum, it would seem that the most rational mode of attempting their relief is by freely lancing the swollen part. Great prejudices, however, still

exist in the minds of some parents against this operation. They think it gives great pain, and, if the tooth is not very near, makes its coming through the gum subsequently the more difficult.

With regard to the first objection, the lancet is carried through the gum so quickly, that this is hardly possible; and the fact that the infant will often smile in your face after it is done, although previously crying from pain, is sufficient evidence that it is not a very painful operation. In reference to the second, that the scar which ensues, opposes, by its hardness, the subsequent progress of the tooth, it is quite groundless; for cicatrices, like all other new-formed parts, are much more easily absorbed than the original structure.

Of the practical utility and perfect safety of this operation we have ample proof in its daily performance with impunity, and in the instant relief which it often affords to all the symptoms.

Mere scarifying the gums is sometimes all that is required, and will afford great relief. This operation, therefore, should not be opposed by the mother. She, at the same time, should

be acquainted with its precise object, lest the speedy return of the symptoms, and the non-appearance of the expected tooth, might tend to bring the operation of lancing the gums into disrepute.

The parental management of the infant, then, and by which much of the pain and difficulty of teething may be removed or alleviated, consists in attending to the following directions: —

First, to the state of the mouth. — To this it is an important part of the mother's duty to pay especial attention; and, by so doing, she will save her child much suffering. The condition of the mouth should be carefully inspected from time to time; and should a swollen gum be discovered, it should immediately be attended to, not waiting till constitutional symptoms appear before she employs proper aid for her child. For this purpose the mother should make herself familiar with the appearances of the gum under distention and inflammation; a matter of no difficulty, accompanied, as this condition usually is, by a profuse secretion of saliva, heat of mouth, and at a time when the age of the child justifies the supposition that it is about to

cut its first tooth, or, if it have some teeth, that others are about to appear.

Secondly, to the food. — If a child is teething with difficulty, it should always have its quantity of nourishment diminished. If it is being fed, as well as nursed at the breast, at the time, the former should be immediately withheld: if it is being fed alone, the only kind of food that should be allowed is milk and water. These cases are much aggravated by the not uncommon habit of parents giving the infant food whenever it cries from the irritation attending upon the process; and thus a slightly difficult dentition is converted into serious disease.

Thirdly, to the state of the bowels. — These must be carefully watched, that they may not become confined; it being necessary that they should be gently relaxed at this time. If a slight diarrhœa is present, it must not be checked; if it pass beyond this, however, medicine must be had recourse to, and great benefit will also arise from putting the child into a warm *hip-bath*, and warmly clothing the body, but keeping the head cool.

Fourthly, to the head. — The infant's head

should be washed with cold water night and morning, and no other covering than that which nature has provided should be put upon it when within doors or asleep; and on no occasion should warm felt or velvet hats be worn during mild or warm weather, straw or white hats being much lighter and cooler. The child should be much in the open air.

The sponging of the infant's body daily, either with cold or tepid water, must depend upon the season of the year and constitution of the child, as well as upon other circumstances. Sponging the *head* with cold water night and morning is almost invariably atttended with great benefit, and may be resorted to in every case without fear; and now and then the use of the warm hip-bath, for several days together, will be ordered by the physician, which, by acting upon the skin, diminishes the determination of blood to the head, and thus forms an important source of relief.

Fifthly, of convulsions. — If they should occur, and they are not unfrequently excited by difficult teething, and then give great alarm to the parent, relief will be afforded by immersing the

hips, legs, and feet of the infant in water as warm as can be borne, and at the same time applying over the head and temples a piece of flannel wet with cold water. I have also often cut the fit short by sprinkling cold water in the child's face while in the bath. The gums should always be looked to, and if they appear swollen, and painful, at once lanced. I have known the most formidable convulsions to cease immediately after this operation.

Sixthly, of the use of opiates. — It is the practice with some nurses to administer narcotics to quiet infants while teething. It is not only objectionable, but, from the uncertain effects of sedatives upon infants, a very dangerous practice, and they ought never to be given, except at the suggestion of a medical man. It is far better, if the child is restless at night, to have it frequently taken out of its cot, and carried about in an airy room; for the cool air, and change of posture, will do much to allay the feverishness and restlessness of the child.

From these few hints, it must have been seen how much the sufferings from teething may be

mitigated by judicious management. That, if the parent is able to support her infant upon the breast alone, teething will be found comparatively an easy process, and unattended with danger; the mother thus reaping a delightful reward for all the anxieties and privations nursing necessarily involves. That the child brought up partially, or entirely, by hand will always pass through dentition with more or less of pain and difficulty; but that even here, if the diet has been properly regulated, much less suffering and inconvenience will arise than when less attention has been paid to it. And, lastly, that, when teething is difficult, how highly important it is to call in proper aid at an early period, and to carry out fully the directions of the medical attendant, allowing no foolish prejudices to interfere with his prescriptions and management.

If I stood in need of any argument to impress upon the mind of a parent the importance of attending to the last injunction, I would simply state, that its neglect is but too frequently the cause of disease of the brain, terminating in death, or a state of idiotcy far worse than

death, of which I know more than one living instance.

It may be as well to add, that *eruptions* about the ears, head, face, and various parts of the body, very frequently appear during the process of the first teething.* If they are slight, they should be left alone, being rather useful than otherwise; if they are troublesome, they must receive that kind of attention from the parent which will be pointed out under the chapter on diseases. The same remark applies to enlargements of the glands of the neck, which frequently appear at this time.

* In some infants a rash always precedes the cutting a tooth. Sometimes it appears in the form of hard elevated pimples as large as peas; in other instances in the form of red patches, of the size of a shilling, upon the arms, shoulders, and back of the neck. They are always harmless, require no particular attention, and prevent, I doubt not, more serious complaints.

SECT. II.—HINTS UPON THE PERMANENT OR ADULT TEETH.

Parents are not sufficiently alive to the importance of attending to the condition of the mouth of their children at the period of changing the first for the second set of teeth; they do not seem to be aware how much the comfort, appearance, and future health of the child depends upon it. Nor do they subsequently impress upon the minds of their children how necessary, on their part, is the observance of certain rules for the preservation of the teeth, and how distressing are the effects which result from their neglect. It is proposed, here, to say a few words for the information and guidance of the parent upon this subject.

The Manner in which they appear.

The change of the temporary for the permanent or adult teeth commences, in the majority

of instances, at about seven years of age; occasionally it occurs as early as five, and as late as eight years and a half. The necessity which exists for this change, and the mode by which it is effected, are striking and beautiful; it is, however, not our object to enter fully upon its consideration here.

It has already been observed, that the infant is born with the rudiments of two sets of teeth in the jaw, although neither make their appearance till long after birth. The time when, and the manner in which the first set appear has been pointed out. Now although these admirably answer the purposes for which they were given up to the seventh year, after this period they fail to do so: they are not sufficiently numerous,—in their structure they are not strong or durable,—nor is their power of mastication sufficiently great.

They are not sufficiently large or numerous. If the mouth of a child at this age is examined, it will be seen, that a considerable interval has taken place between the teeth in consequence of the growth and expansion of the face; hence a larger set has become necessary to fill the arch.

But it may be asked, do not the teeth grow with the growth of the body? and if not, why is it so? They do not, and for this reason: the important office which these organs are destined to perform requires that they should be composed of a substance too dense and of too low an organization to allow of any subsequent growth and enlargement. Thus the size of the teeth is determined and acquired before they make their appearance through the gums. This being the case, it will be readily seen, that the teeth which would be of appropriate size in the mouth of the infant, would be quite inadequate to the enlarged dimensions of the adult; hence the necessity of a second set, exceeding in number and size the teeth of the first.

That a necessity also exists at this age, that the weak and delicate teeth of childhood should be exchanged for a set stronger and more durable in their structure, more robust and more powerful, will be sufficiently apparent, if we only recollect the great change which has gradually been taking place in the nature of the food of the two epochs of childhood and adult age.

The second set, or permanent teeth, then, lying under the milk-teeth and hidden in the jaw, undergo in this situation their full developement, before they appear above the gum. This occurrence commences about seven years of age, at which period the first set begin to fall out from their roots becoming absorbed, and no longer retaining their hold of the jaw; to be entirely replaced in the course of a few years by the permanent set, which thus succeeds them. The first teeth of this set which make their appearance are the large double teeth, which emerge from the gum immediately behind the last of the temporary set. Next the two front teeth of the lower jaw fall out, and are succeeded by two others of similar character and form, but of larger size; then the two corresponding teeth of the upper row are cast off, and their place supplied; shortly after the teeth immediately adjoining these; then the double teeth of the first set are exchanged for their smaller successors of the second. The eye-teeth after a time begin to make their appearance; and then more double teeth; making in all twenty-eight teeth, and occupying in their developement from the

seventh to the fourteenth year of age. They are not, however, yet complete; for between the latter date and the twenty-first year four more teeth appear, called the wisdom teeth, making the adult set or permanent teeth to amount in all to thirty-two teeth. It should be observed, that whilst this is the most usual course in which this set appear, the line of succession is sometimes different.

Their Value and Importance.

It would seem almost unnecessary to say a word upon so self-evident a truth, and yet perhaps the full extent of this statement is not generally appreciated. It has not, perhaps, occurred to the minds of all, that upon the right position and arrangement of the teeth *the beauty* and *expression of the countenance* much depends. But so it is; for however regular and perfect the general features, if the teeth are irregular or deficient, an unpleasing expression, proportionate to the extent of the displacement, is inevitably produced. Now every mother should

be alive to this fact, that she may early apply to the dentist to have any error of the above nature rectified, before it is too late.

On their complete and entire state also depends *the perfection of utterance and articulation.* The child, for instance, makes no attempt at articulation until it has acquired several teeth; this faculty becomes also exceedingly imperfect during the process of changing them; from this time it continues to improve, until again it is permanently impaired in old age, when they are finally lost. And so again, if a child lose merely a single tooth from the front of its mouth, lisping will result; or if a supernumerary or irregular tooth be present, the articulation will be abrupt and imperfect: — the former plainly showing the importance of the entireness of the series, and the latter, the necessity of regularity in their arrangement and position.

The teeth, however, are chiefly important in relation to the part they sustain in connection with digestion, viz. the mastication of the food. By this act the food, after being received into the mouth, is mixed with the saliva and broken

down, till it becomes of an uniform pulpy consistence, fit for being easily swallowed, and acted upon by the gastric juice on its arrival in the stomach. That due mastication of the food is essential to healthy digestion, which will be promoted or retarded in exact proportion as it approaches or falls short of this point, is a fact so generally known as scarcely to need comment. Suffice it to add, that, if food be introduced into the stomach unmasticated, the gastric juice will only act upon its surface; and after a number of hours it will be either rejected by vomiting, or pass on into the intestine, to give rise to cholic, bowel complaints, or flatulence, and very frequently in children to a serious attack of convulsions.

Their Management and Preservation.

Irregularity of arrangement and position.—Every parent ought to have the mouth of her child inspected occasionally, during the advance of the permanent teeth, that any irregularity in

their position or arrangement may be prevented. And it is equally her duty to see to it, that she choose a competent person to do this, since great mistakes are not unfrequently made in this matter, and which themselves become the source of evils far more serious than those they are intended to obviate. "I have known," says Mr. Bell, "no less than eight or even ten firm teeth forcibly removed from the jaws of a child at once, when there was not the slightest reason to apprehend any evil result from their being left alone." Here there was a most cruel, because unnecessary, infliction of pain, as well as great hazard incurred of seriously injuring the permanent teeth by interfering with the secretion of their enamel. And besides all this there is another and yet greater evil, for, if the temporary teeth be removed, before the permanent ones are so advanced as to be ready to occupy their situation, the arch of the jaw will assuredly contract, and when, subsequently, the permanent teeth are fully formed, there will not be room for them to range in their proper situation. Thus the operation which was intended to pre-

vent irregularity becomes the cause of its occurrence, and that in its very worst form, producing a want of accordance between the size of the teeth and that of the jaw.

The eye-teeth generally occasion most anxiety to a parent, from the prominent position in which they present themselves; but in the majority of cases nothing but time is required to reduce them to their proper station. But, whatever may be the peculiarities of each individual case, the dentist will decide what may be required; only, I would again repeat, do not neglect the occasional inspection of the mouth at this age, if you regard the future comfort and appearance of your child.

Their preservation.—The preservation of the teeth requires attention to several points; the first and principal of which is, to enforce the habit in the child of thoroughly cleaning the teeth by means of water and a brush night and morning, and rinsing out the mouth after each meal. The brush should not be very hard, as it will not only be more difficult to clean the interstices between the teeth, the

part in which the tartar* is most likely to be deposited, but by its friction, will occasion the gradual absorption of the gum and the exposure of the neck of the teeth. The hair of the brush should be firm and elastic, and not too closely set.

Tartar.—If there is a tendency to the formation of tartar, then it will be necessary to have recourse to some tooth-powder. Tooth-powders, however, must be chosen with care, as many of them are composed of substances highly injurious to the teeth. "Many of the tooth-powders which are offered for sale, with the promise of rendering the teeth beautifully white, perform, for a time, all that is promised, at the expense of permanent and irremediable injury to the teeth; for they often contain a quantity of tartaric or other acid, which effects a gradual decomposition of the enamel."† Prepared chalk is one of the simplest and best tooth-powders.

* A sort of calcareous substance, which becomes deposited at the roots of the teeth, from a want of proper attention to cleanliness; and, if allowed to remain, will destroy first their beauty, and then the organ itself.

† Bell on the Teeth.

The following form, also, may be used with advantage: —

Prepared chalk, three ounces;
Orris root, powdered, half an ounce;
Powdered myrrh, half an ounce;
Cuttle fish, powdered, one ounce;
Essential oil of cinnamon, four drops. — Mix.

The best preservative, then, against the formation of tartar, is to see that the child cleans his teeth thoroughly night and morning with the brush, powder, and water, and also (if possible) that he rinses out the mouth after each meal.

If the gums should be tender, irritable, and bleed (as is frequently the case when an individual gets out of health, or the tartar accumulates) the mouth may be washed night and morning with a tumbler of tepid water, containing from ten to twenty drops of the tincture of myrrh, and the same quantity of spirits of camphor; or the following form may be used: —

Alum, one drachm and a half;
Tincture of myrrh, two drachms;
Camphor mixture, five ounces and a half. — Mix.

Acids.—The use of acids to the teeth cannot be too strongly deprecated: they decompose their substance, and lead to their rapid decay. Hence the whiteness produced by acid tooth-powders and washes is not less deceitful than ruinous in its consequences. As has been just observed, they perform all that their vendors promise, causing the teeth, for a little while, to become very white and beautiful in their appearance, but, at the same time, injuring them irremediably: the enamel becomes gradually decomposed, the bone of the tooth exposed, and its death is the inevitable consequence.

It is therefore of great importance when acid medicines are ordered for children that they should be taken through a glass tube, to prevent their coming in contact with the teeth. From a want of this precaution, I know a lady (and there are many such instances) who once had as sound and fine a set of teeth as any one could boast of, but from this cause has had nearly the whole of the upper row destroyed. She was in delicate health: it was judged requisite that she should take for a considerable time (with other medicines) sulphuric acid; but the glass tube

was not thought of, and the consequences followed which have been described.

Calomel.—This medicine, as it is frequently given, alone, or in the little white powders, in infancy and childhood, by mothers and nurses, is productive of serious and indeed irremediable injury to the teeth. "The immoderate use of mercury in early infancy produces, more perhaps than any other similar cause, that universal tendency to decay, which, in many instances, destroys almost every tooth at an early age. It is certainly not unimportant to bear this fact in mind, in the administration of this *sovereign remedy*, this panacea, as many appear to consider it, in infantile diseases." *

Heat and Cold.—The teeth are exceedingly apt to suffer from sudden variations of tempera ture. Fluids, therefore, should never be taken into the mouth so hot or so cold as to produce the slightest pain; and, for the same reason, the water with which the mouth is cleansed should in winter be always warm or tepid. When ices are taken, the precaution of placing them in the

* Bell on the Teeth.

centre of the mouth, so as to prevent contact with the teeth, should be carefully observed.

There are many other causes which might be mentioned as tending to induce decay of the teeth, but their consideration here is purposely avoided.

It is hoped that enough has been said to draw the parent's attention to the subject of the teeth, to prevent their neglect, and yet at the same time to induce a cautious management.

CHAP. IV.

HINTS FOR THE EARLY DETECTION OF DISEASE IN THE CHILD BY THE MOTHER.

LIFE is soon extinguished in infancy. At this epoch any disease is formidable, and must be met most promptly. It is either sudden and active in its assaults, or comes with slow and insidious approach. The first signs of its coming on are not always visible to an unpractised eye: it may have made dangerous advances before the mother's mind is awakened to its presence; and medical aid may be solicited when remedies and advice are no longer of any avail.

It is therefore highly important that a mother should possess such information as will enable her to detect disease at its first appearance, and thus insure for her child timely medical assist-

ance. This knowledge it will not be difficult for her to obtain. She has only to bear in mind what are the indications which constitute health, and she will at once see that all deviations from it must denote the presence of disorder, if not of actual disease. With these changes she must to a certain extent make herself acquainted.

SECT. I. — SIGNS OF HEALTH.

The signs of health are to be found, first, in the healthy performance of the various functions of the body; the regular demands made for its supply, neither in excess or deficiency; and a similar regularity in its excretions both in quantity and appearance.

If the figure of the healthy infant is observed, something may be learnt from this. There will be perceived such an universal roundness in all parts of the child's body, that there is no such thing as an angle to be found in the whole figure; whether the limbs are bent or straight, every line forms a portion of a circle. The

limbs will feel firm and solid, and unless they are bent, the joints cannot be discovered.

The tongue, even in health, is always white, but it will be free from sores, — the skin cool, — the eye bright, — the complexion clear, — the head cool, — and the abdomen not projecting too far, — the breathing regular, and without effort.

When awake, the infant will be cheerful and sprightly, and, loving to be played with, will often break out into its merry, happy, laugh; whilst, on the other hand, when asleep, it will appear calm, every feature composed, its countenance displaying an expression of happiness, and frequently, perhaps, lit up with a smile.

SECT. II. — SIGNS OF DISEASE.

Just in proportion as the above appearances are present and entire, health may be said to exist; and just in proportion to their partial or total absence disease will have usurped its place.

We will, however, for the sake of clearness examine the signs of disease as they are manifested separately by the countenance, — the gestures, — in sleep, — in the stools, — and by the breathing and cough.

Of the Countenance.

In health the countenance of a child is expressive of serenity in mind and body; but if the child be unwell, this expression will be changed, and in a manner which, to a certain extent, will indicate what part of the system is at fault.

The brows will be contracted, if there is pain, and its seat is in the *head.* This is frequently the very first outward sign of any thing being wrong, and will occur at the very onset of disease; if therefore remarked at an early period, and proper remedies used, its notice may prevent one of the most fearful of infantile complaints — "Water in the Head."

If this sign is passed by unheeded, and the above disease be threatened, soon the eyes will become fixed and staring, — the head hot, and moved uneasily from side to side upon the pillow, or lie heavily upon the nurse's arm, — the child will start in its sleep, grinding its teeth, and awake alarmed and screaming, — its face will be flushed, particularly the cheeks (as if rouged), — its hands hot, but feet cold, — its bowels obstinately costive, or its motions scanty, dark-coloured, and foul.

If *the lips are drawn apart*, so as to show the teeth or gums, the seat of the pain is in the *belly*. This sign, however, will only be present during the actual existence of suffering; if, therefore, there be any doubt whether it exist, press upon the stomach, and watch the effect on the expression of the countenance.

If the pain arise simply from irritation of the bowels excited from indigestion, it will be temporary, and the sign will go and come just as the spasm may occur, and slight remedial measures will give relief.

If, however, the disease be more serious, and

inflammation ensue, this sign will be more constantly present, and soon the countenance will become pale, or sallow and sunken, — the child will dread motion, and lie upon its back with the knees bent up to the belly, — the tongue will be loaded, — and in breathing, while the chest will be seen to heave with more than usual effort, the muscles of the belly will remain perfectly quiescent.

If the nostrils are drawn upwards and in quick motion, pain exists in the *chest.* This sign, however, will generally be the accompaniment of inflammation of the chest, in which case the countenance will be discoloured,—the eyes more or less staring, and the breathing will be difficult and hurried; and if the child's mode of respiring be watched, the chest will be observed to be unmoved, while the belly quickly heaves with every inspiration.

Convulsions are generally preceded by some changes in the countenance. The upper lip will be drawn up, and is occasionally bluish or livid. Then there may be slight squinting, or a singular rotation of the eye upon its own axis;

alternate flushing or paleness of the face; and sudden animation followed by languor.

These signs will sometimes manifest themselves many hours, nay days, before the attack occurs; may be looked upon as premonitory; and if timely noticed, and suitable medical aid resorted to, the occurrence of a fit may be altogether prevented.

The state of the eyes should always be attended to. In health they are clear and bright, but in disease they become dull, and give a heavy appearance to the countenance; though after long continued irritation they will assume a degree of quickness which is very remarkable, and a sort of pearly brightness which is better known from observation than it can be from description.

The direction of the eyes, too, should be regarded, for from this we may learn something. When the infant is first brought to the light, both eyes are scarcely ever directed to the same object: this occurs without any tendency to disease, and merely proves, that regarding one object with both eyes is only an acquired habit. But when the child has come to that age when the eyes are by habit directed to the

same object, and afterwards it *loses* that power, this circumstance alone may be looked upon as a frequent prelude to disease affecting the head.

Of the Gestures.

The gestures of a healthy child are all easy and natural; but in sickness those deviations occur, which alone will often denote the nature of the disease.

Suppose an infant to have acquired the power to support itself, to hold its head erect; let sickness come, its head will droop immediately, and this power will be lost, only to be regained with the return of health; and during the interval every posture and movement will be that of languor.

The little one that has just taught itself to run alone from chair to chair, having two or three teeth pressing upon and irritating the gums, will for a time be completely taken off its feet, and perhaps lie languidly in its cot, or on its nurse's arm.

The legs being drawn up to the belly, and accompanied by crying, are proofs of disorder and pain in the bowels. Press upon this part, and your pressure will increase the pain. Look to the secretions from the bowels themselves, and by their unhealthy character your suspicions, in reference to the seat of the disorder, are at once confirmed.

The hands of a child in health are rarely carried above its mouth; but let there be any thing wrong about the head and pain present, and the little one's hands will be constantly raised to the head and face.

Sudden starting when awake, as also during sleep, though it occur from trifling causes, should never be disregarded. It is frequently connected with approaching disorder of the brain. It may forebode a convulsive fit, and such suspicion is confirmed, if you find the thumb of the child drawn in and firmly pressed upon the palm, with the fingers so compressed upon it, that the hand cannot be forced open without difficulty. The same condition will exist in the toes, but not to so great a degree; there may also be a puffy state of the back of the

hands and feet, and both foot and wrist bent downwards.

There are other and milder signs threatening convulsions and connected with gesture, which should be regarded: — the head being drawn rigidly backwards, — an arm fixed firmly to the side, or near to it, — as also one of the legs drawn stifly upwards. These signs, as also those enumerated above, are confirmed beyond all doubt, if there be present certain alterations in the usual habits of the child: — if the sleep is disturbed, — if there be frequent fits of crying, — great peevishness of temper, — the countenance alternately flushed and pale, — sudden animation followed by as sudden a fit of languor, — catchings of the breath followed by a long and deep inspiration, — all so many premonitory symptoms of an approaching attack.

Of the Sleep.

The sleep of the infant in health is quiet, composed, and refreshing. In very early infancy, when not at the breast, it is for the most

part asleep in its cot; and although as the months advance it sleeps less, yet when the hour for repose arrives, the child is no sooner laid down to rest, than it drops off into a quiet, peaceful slumber.

Not so, if ill. Frequently it will be unwilling to be put into its cot at all, and the nurse will be obliged to take the infant in her arms; it will then sleep but for a short time, and in a restless and disturbed manner.

If it suffer pain, however slight, the countenance will indicate it; and, as when awake, so now, if there is any thing wrong about the head, the contraction of the eye-brow and grinding of the teeth will appear; if any thing wrong about the belly, the lips will be drawn apart, showing the teeth or gums, — and in both instances there will be great restlessness and frequent startings.

Of the Stools.

In the new-born infant the motions are dark coloured, very much like pitch both in con-

sistence and appearance. The first milk, however, secreted in the mother's breast, acts as an aperient upon the infant's bowels, and thus in about four-and-twenty hours it is cleansed away; or if it should not, a tea-spoonful of castor oil accomplishes this purpose.

From this time, and through the whole of infancy, the stools will be of a lightish yellow colour, the consistence of thin mustard, having little smell, smooth in appearance, and therefore free from lumps or white curded matter, and passed without pain or any considerable quantity of wind. And as long as the child is in health, it will have daily two or three, or even four, of these evacuations. But as it grows older, they will not be quite so frequent; they will become darker in colour, and more solid, though not so much so as in the adult.

Any deviation, then, from the above characters, is of course a sign of something wrong; and as a deranged condition of the bowels is frequently the first indication we have of coming disease, the nurse should daily be directed to watch the evacuations. Their appearance, colour, and the manner in which discharged, are the points

principally to be looked to. If the stools have a very curdy appearance, or are too liquid, or green, or dark-coloured, or smell badly, they are unnatural. And in reference to the manner in which they are discharged, it should be borne in mind, that, in a healthy child, the motion is passed with but little wind, and as if *squeezed* out, but in disease, it will be thrown out with considerable force, which is a sign of great irritation. The number, too, of stools passed within the four-and-twenty hours it is important to note, so that if the child does not have its accustomed relief, (and it must not be forgotten that children, although in perfect health, differ as to the precise number,) a little castor oil may be at once exhibited, and thus mischief be prevented.

This, however, is not the place to discuss the question of disordered bowels, but simply to point out how this circumstance may be known.*

* See section on Disorders of the Stomach and Bowels, p. 208.

Of the Breathing and Cough.

The breathing of a child in health is formed of equal inspirations and expirations, and it breathes quietly, regularly, inaudibly, and without effort. But let inflammation of the air-tubes or lungs take place, and the inspiration will become in a few hours so quickened and hurried, and perhaps audible, that the attention has only to be directed to the circumstance to be at once perceived.

Now all changes which occur in the breathing from its healthy standard, however slight the shades of difference may be, it is most important should be noticed early. For many of the complaints in the chest, although very formidable in their character, if only seen early by the medical man, may be arrested in their progress; but otherwise, may be beyond the control of art. A parent, therefore, should make herself familiar with the breathing of her child in health, and she will readily mark any change which may arise.

Of *cough* I should not have said any thing in

this chapter, as it can never fail to be noticed, except that it is highly necessary to throw out one caution. Whenever a child has the symptoms of a common cold, attended by *hoarseness* and *a rough cough*, always look upon it with suspicion, and never neglect seeking a medical opinion. Hoarseness does not usually attend a common cold in the child, and these symptoms may be premonitory of an attack of "croup;" a disease excessively rapid in its progress, and which, from the importance of the parts affected, carrying on, as they do, a function indispensably necessary to life, requires the most prompt and decided treatment.

The following observations of Dr. Cheyne are so strikingly illustrative, and so pertinent to my present purpose, that I cannot refrain inserting them: — "In the approach of an attack of croup, which almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited, in variable spirits, more ready than usual to laugh than to cry, a little flushed, occasionally coughing, the

sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep, before the nature of the disease with which he is threatened is apparent; then, perhaps, without waking, he gives a very unusual cough, well known to any one who has witnessed an attack of the croup; it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penetrates the walls and floor of the apartment, and startles the experienced mother,—'Oh! I am afraid our child is taking the croup!' She runs to the nursery, finds her child sleeping softly, and hopes she may be mistaken. But remaining to tend him, before long the ringing cough, a single cough, is repeated again and again; the patient is roused, and then a new symptom is remarked; the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough," &c.

How important that a mother should be acquainted with the above signs of one of the most terrific complaints to which childhood is subject; for, if she only send for medical assist-

ance during its first stage, the treatment will be almost invariably successful; whereas, if this "golden opportunity" is lost, this disease will seldom yield to the influence of measures, however wisely chosen or perseveringly employed.

SECT. III.—OTHER CIRCUMSTANCES WHICH WILL ASSIST IN THE EARLY DETECTION OF DISEASE.

1. *The influence of the seasons in producing particular forms of disorder.*—The recollection of the fact, that at the different seasons of the year some diseases are more prevalent than at other periods, will greatly aid a judicious parent in the early detection of the presence of disorder, and its kind, in her child.

Thus, in *the early part of the winter*, what is called catarrh, viz. an increased secretion of mucus from the membranes of the nose, fauces, and air-tubes, with fever, and attended with sneezing and cough, thirst, lassitude, and want of appetite, is generally prevalent.

As the winter advances, the air-tubes of the lungs, and the lungs themselves, are liable to become the seat of disorder; and those signs will present themselves, which have been pointed out in the previous section as characteristic of such attacks.

In the spring, we have still the same diseases prevalent, and in addition, measles, scarlet fever, small-pox, and chicken pox, which increase in liability towards the close of this season, and with the first weeks of summer.

In the summer, disease is less prevalent than at any other period of the year; but towards its middle and close, and through the whole of the autumnal months, bowel complaints may be expected, in the forms of diarrhœa, cholera, and dysentery.

2. *The influence of a hereditary predisposition to certain diseases.*—Without entering into this subject at large, still it may be useful to remark, that in some families there is a predisposition to some diseases, which, occurring in the first child, will, as each succeeding child is born, attack at the same age. Amongst other dis-

eases of this class are, croup, hooping-cough, and water in the head.

This observation should not only lead a mother to be alive to the possibility of the successional occurrence of these diseases in her family, and so early note their appearance, and seek medical advice, but should at the same time make her most anxious, on the one hand, to shield her child from all their exciting causes, and on the other, to adopt those measures which may contribute indirectly to overcome the constitutional predisposition to them.

Of the *scrofulous constitution*, I will merely mention here, that it is of the greatest importance, where a predisposition to this disease exists in a family, that a mother should immediately attend to any alteration in the gait or contour of her child, and give prompt attention also to any complaint made of swelling about a joint, although it may be unattended with pain. The importance of this remark will be seen by contrasting the result of the following cases which occurred in children of the same family.

CASE I.

A. B., a female child, having blue eyes, light hair, and a fair complexion, in the early part of the year 1838, being then two years of age, had an enlargement of the left knee joint. *For some weeks previous to this time, there had been a degree of heat about the part; but as no pain apparently existed, it was not regarded as of any consequence, and nothing was done.* The child, living in the neighbourhood of London, was afterwards placed under medical treatment. Two or three months having elapsed, it was brought to town, and shown to me, in consequence of a slight tumefaction over the lower part of the spine. This soon disappeared under the measures employed, and eventually the disease of the knee (evidently scrofulous) was arrested, so that now the case promises to be cured; but the joint will for ever be stiff, and the limb thus affected shorter than the other.

CASE II.

G. B., the brother of the above, a handsome boy, with light hair, fine blue eyes, — indeed,

very much like his little sister, — in the year 1836, had enlargements of the glands in his neck, which were relieved by the treatment resorted to.

In April, 1839, being then eight years old, he was observed by his mother to limp slightly in walking, but complained of little or no pain. From the caution, however, which had been given to the parent at the time I was consulted about the previous case, to notice at an early period any symptom of this nature in her children, *the fact was immediately attended to.* The affection was evidently in the hip; there was imperfection in the gait, and pain upon pressing over the joint. A blister was applied, perfect rest to the limb enjoined, and steel medicines ordered; and in a fortnight the motions of the joint were restrained more effectually by the application of strips of soap plaster and a bandage. In three months the child was ordered to the sea-side, and eventually was able to walk without the slightest limp or pain, and may be said to be quite well.

I would not say that in the first case, if the dis-

ease had been discovered early, and at that time met by judicious medical treatment, a stiff knee and shortened limb would have been prevented, although this is my belief; — but in reference to the latter case, I have no hesitation in saying, that without the disease had been early detected by the mother, and as promptly attended to by her, the remedial measures might have failed,—certainly the result would not have been so highly satisfactory as it was.

CHAP. V.

ON WHAT CONSTITUTES THE MATERNAL MANAGEMENT OF THE DISEASES OF CHILDREN.

THE especial province of the mother is the prevention of disease, not its cure. To the establishment and carrying out of this principle, every word contained in the preceding pages has directly or indirectly tended.

This, however, is not all. When disease attacks the child, the mother has then a part to perform, which it is especially important during the epochs of infancy and childhood should be done well. I refer to those duties which constitute the maternal part of the management of disease.

Medical treatment, for its successful issue, is greatly dependent upon a careful, pains-taking, and judicious maternal superintendence. No medical treatment can avail at any time, if di-

rections be only partially carried out, or be negligently attended to; and will most assuredly fail altogether, if counteracted by the erroneous prejudices of ignorant attendants. But to the affections of infancy and childhood, this remark applies with great force; since, at this period, disease is generally so sudden in its assaults, and rapid in its progress, that unless the measures prescribed are rigidly and promptly administered, their exhibition is soon rendered altogether fruitless.

The amount of suffering, too, may be greatly lessened by the thoughtful and discerning attentions of the mother. The wants and necessities of the young child must be anticipated; the fretfulness produced by disease, soothed by kind and affectionate persuasion; and the possibility of the sick and sensitive child being exposed to harsh and ungentle conduct, carefully provided against.

Again, not only is a firm and strict compliance with medical directions in the administration of remedies, of regimen, and general measures, necessary, but an unbiased, faithful, and full report of symptoms to the physician,

when he visits his little patient, is of the first importance. An ignorant servant or nurse, unless great caution be exercised by the medical attendant, may, by an unintentional but erroneous report of symptoms, produce a very wrong impression upon his mind, as to the actual state of the disease. His judgment may, as a consequence, be biased in a wrong direction, and the result prove seriously injurious to the well-doing of the patient. The medical man cannot sit hour after hour watching symptoms; hence the great importance of their being faithfully reported. This can alone be done by the mother, or some person equally competent.

There are other weighty considerations which might be adduced here, proving how much depends upon efficient maternal management in the time of sickness; but they will be severally dwelt upon, when the diseases with which they are more particularly connected are spoken of.

SECT. I. — ACCIDENTS AND DISEASES WHICH MAY OCCUR TO THE INFANT AT BIRTH, OR SOON AFTER.

Still-born.

Sometimes the child comes into the world apparently dead, and, unless the most active exertions are made by the attendants, is lost. The superintendence of the means used devolves upon the medical man; but it would be often well if his assistants were already acquainted with the measures pursued under these circumstances, for they would be more likely to be carried into effect with promptitude and success, than they now frequently are. And again, the still-born child is frequently in this state from having been born very rapidly, and before the medical man can have arrived; it will be more especially useful in such a case, that the attendants in the lying-in-room should know how to proceed.

The various causes producing this condition it is unnecessary to mention.

The condition itself may exist in a greater or less degree: the infant may be completely still-born, with no indication of life, except, perhaps, the pulsation of the cord, or a feeble action of the heart; — or it may make ineffectual efforts at breathing, or even cry faintly, and yet subsequently perish for want of strength to establish perfectly the process of respiration. Under all these circumstances, a good deal can often be effected by art. In every instance, therefore, in which we have not positive evidence of the child being dead, in the existence of putrefaction, or of such malformation as is incompatible with life, it is our duty to give a fair trial to the means for restoring suspended animation; and as long as the slightest attempt at motion of the respiratory organs is evinced, or the least pulsation of the heart continues, we have good grounds for persevering and hoping for ultimate success.

The measures to be employed to restore a still-born child will be a little modified by the circumstances present.

If there is no pulsation — no beating in the cord, when the child comes into the world, it may at

once be separated from the mother. This is to be effected by first tying the navel-string with common sewing thread (three or four times doubled), about two inches from the body of the child, and again two inches from the former ligature, and then dividing the cord with a pair of scissors between the two. And now the means for its restoration are to be made use of, which are detailed below, viz. inflation of the lungs, and perhaps the warm bath. If, with the above circumstances, the child's face be livid and swollen, some drops of blood should previously be allowed to escape before the ligature is applied to that part of the navel-string which is now only attached to the child.

If there is pulsation in the cord, but respiration is not fully established, it must not be divided; and as long as pulsation continues, and the child does not breathe perfectly and regularly, no ligature should be applied. The first thing to be done here, is to pass the finger, covered with the fold of a handkerchief or soft napkin, to the back of the child's mouth, to remove any mucus which might obstruct the passage of air into the lungs, and at the same time to tickle

those parts, and thereby excite respiratory movements. The chest should then be rubbed by the hand, and a gentle shock given to the body by slapping the back. If these means fail, the chest and soles of the feet must next be rubbed with spirits, the nostrils and back of the throat irritated with a feather previously dipped in spirits of wine, and ammonia or hartshorn may be held to the nose.

Inflation of the lungs. — These means not having been successful, and the pulsation in the cord having ceased, the infant must be separated, and inflation of the lungs resorted to. This is to be effected gently and cautiously as follows: —

The child, wrapped in flannel, is to be laid on its back upon a table placed near the fire. Its head is to be slightly extended, and the nostrils held between the fingers and thumb of one hand, whilst with the fingers of the other slight pressure is to be made upon the pit of the stomach, so as to prevent the air from passing into that organ. The lungs of the child are now to be filled with air, by the operator applying his

own lips — with a fold of silk or muslin intervening, for the sake of cleanliness — to those of the child, and then simply blowing in its mouth, he is to propel the air from his own chest into that of the infant. Previously, however, to his doing this, he should make several deep and rapid inspirations, and, finally, a full inspiration, in order to obtain greater purity of air in his own lungs.

When the chest of the child has been thus distended, it is to be compressed gently with the hand, so as to empty the lungs; and then the inflation, with the alternately compressing the chest, must be repeated again and again, until either the commencement of *natural respiration* is announced by a sneeze or deep sigh, or until after *long-continued, steady, persevering*, but unavailing, efforts to effect this object shall have removed all ground of hope for a successful issue.

Whilst these efforts are being made, some other individual must endeavour to maintain or restore the warmth of the infant's body, by gently but constantly pressing and rubbing its limbs between his warm hands. And after respiration is established, the face must still be

freely exposed to the air, whilst the warmth of the limbs and body is carefully sustained.

It will sometimes happen—and to this circumstance the operator should be fully alive—that when the child begins to manifest symptoms of returning animation, its tongue will be drawn backwards and upwards against the roof of the mouth, filling up the passage to the throat, and preventing further inflation of the lungs. This is to be remedied by the introduction of the fore-finger to the upper and back part of the child's tongue, and gently pressing it downwards and forwards, by which the difficulty will be removed, and the air again passes.

The warm bath. — More reliance may be placed upon the above measure to restore animation, than upon the warm bath. Still this is sometimes useful, and therefore must not be neglected. Whilst inflation is going on, the bath may be got ready, then resorted to, and if unsuccessful, inflation may and ought again to be followed up.* If the bath is useful at all, it

* We should not relinquish our endeavours at resuscitation under two or three hours, or even longer; and if ultimately successful, the state of the infant should be carefully watched for two or three days.

will be so immediately upon putting the infant into it; respiration will be excited, followed by a cry; and if this does not occur at once, it would be wrong to keep the child longer in the bath, as it would be only losing valuable time which ought to be devoted to other efforts. The temperature of the bath should be about 100°; and if, upon plunging the infant into it, it fortunately excite the respiratory effort, it should then be taken out, rubbed with dry but hot flannels, and, when breathing is fully established, laid in a warm bed, or, what is still better, in its mother's bosom; letting it, however, have plenty of air.

Injuries received during Birth.

If a labour be long and tedious, the head and body of the child may be bruised and disfigured.

The shape of the head is frequently altered by the compression it has undergone, so that it may be elongated, and measure from the chin to the back of the head as much as six or seven inches.

This always excites surprise, sometimes apprehension, in the minds of the attendants: there is no ground for it. It must be allowed to regain its natural shape without interference.

Tumours or swellings upon the head are very common. They arise from pressure upon the part during the labour. The only treatment that is required, or safe, is, freedom from all pressure, and the application of cold lotions composed of brandy or vinegar and water. The swelling will gradually subside. It will be right to direct the attention of the medical man to this circumstance.

The face may be frightfully disfigured from the above cause, exceedingly black, and the features distorted. Nothing is necessary here; in a few days the face will recover its proper appearance.

Retention of Urine.

Occasionally an infant will not pass any urine for many hours after its birth. This most frequently arises from the fact of none being

secreted. In the last case of this kind that I was called to, three days had elapsed since birth, and no urine had been passed; it proved that none had been secreted. Sometimes, however, it is the effect of another cause, which the use of the warm bath will be found to remove, which should always therefore be employed four and twenty hours after the birth of the infant, if it has not by that time passed any water.

It now and then happens, but fortunately very rarely, that some physical obstruction exists. It is always important, therefore, for the nurse to pay attention to the above point; and it is her duty to direct the attention of the medical man to the subject, if anything unusual or unnatural be present. The same observation applies to the bowel also; and if twelve hours pass without any motion, the parts should be examined.

Swelling of the Breasts.

At birth, or two or three days subsequently, the breasts of the infant will frequently be found swollen, hard, and painful, containing a fluid

much resembling milk. Nurses generally endeavour to squeeze this out, and thus do great mischief; for by this means inflammation is excited in the part, and sometimes abscess is the result.

If the breasts are simply slightly enlarged, it is unnecessary to do any thing more than rub them occasionally and very gently with warm almond oil, and a little time will restore them to their proper size.

If, however, they are inflamed, hot, painful, with a red surface, and unusually large, a bread and water poultice must be applied every three or four hours, which will generally prevent either the formation of matter, or any other unpleasant consequence. In a few days, under this treatment, they will usually subside, and be quite well.

Inflammation of the Eyes.

Its importance.—About the second or third day after the child's birth, an inflammation sometimes attacks the eye, which is of considerable

consequence. The more so, from its commencing in a way not calculated to excite the attention, or alarm the fears, of the mother or nurse. The child cannot express its sensations, and the swelling of the eye conceals the progress of the disease, so that serious mischief is frequently done before the medical man sees the patient. In the first place, the inflammation is not immediately noticed; and, in the second, the measures employed are frequently insufficient to check its progress: hence it causes more blindness (I refer to the lower classes of society more particularly) than any other inflammatory disorder that happens to the eye; and the number of children is very considerable, whose sight is partially or completely destroyed by it. The parent or nurse is apt to suppose, when this inflammation first appears, that it is merely a cold in the eye, which will go off; and the consequences which I have just mentioned take place, in many cases, before they are aware of the danger, and before the medical man is resorted to for assistance.

I only desire, in mentioning this complaint, to inform the attendants of the lying-in-room

of its great importance, that it may not be trifled with, that upon its first approach the physician may be informed of it, and that the treatment he directs for its cure may be sedulously and rigidly followed.

Symptoms. — The inflammation commonly comes on about three days after birth, but it may take place at a later period. It may be known by its commencing thus: — When the child wakes from sleep, the eyelids will be observed to stick together a little; their edges will be redder than natural, and especially at the corners; the child experiences pain from the access of light, and therefore shuts the eye against it. A little white matter will also be observed lying on the inside of the lower lid. After a short time, the lids swell, become red on their external surface, and a large quantity of matter is secreted, and constantly poured from the eye; the quantity of discharge increasing until it becomes very great.

But enough has been said to point out the importance of the disease, and the signs by which it may be recognised at its first approach.

Treatment. — Keeping the eye free from discharge, by the constant removal of the matter secreted, is what the medical attendant will chiefly insist upon; and without this is done, any treatment he may adopt will be useless; with it, there is no doubt of a successful issue of the case, provided his attention has only been called to it at a sufficiently early period.

Hare-lip.

This is a blemish too well known to require a formal description. The questions most interesting to a mother in relation to it, are, — How is her child to be nourished, that is born with it? and when ought an operation to be performed for its removal?

The mode of feeding the infant. — If the defect is but trifling, the infant will be able to suck, provided the mother's nipple is large, and the milk flows freely from it. If this is not the case, the difficulty may be obviated by using the cork

nipple shield.* I have known this to answer the purpose admirably, when the mother had previously despaired of nursing her infant, the nipple being too small for it to grasp.

If, however, the defect exists in a still greater degree, feeding by means of the spoon must be resorted to; the greatest care being necessary as to the quantity, quality, and preparation of the food.†

Caution in reference to the operation. — With regard to the operation for the removal of this deformity, I would strongly warn parents against desiring its too early performance. Various considerations contribute to make the distressed parents anxious for this. But very seldom indeed — except the deformity be very great, and implicating other parts beside the lip — will the operation be required, or ought it to be resorted to, before the second year and a half of the infant's life; and for this very cogent reasons exist. For instance, convulsions may thus be induced, which often terminate fatally.

* See p. 41. † See "Artificial Feeding," p. 34.

The most proper age for removing this deformity by operation, is from that of two years and a half to four years.

Bleeding from the Navel-string.

Bleeding from the navel-string will sometime take place hours after it has been supposed to be carefully secured. This will arise, either from the cord being carelessly tied, or from its being unusually large at birth, and in a few hours shrinking so much that the ligature no longer sufficiently presses on the vessels. In either case, it is of importance that the attendants in the lying-in-room should understand how to manage this accident when it occurs, that it may not prove injurious or fatal to the child.

The mode of arresting the bleeding. — The clothes of the child and the flannel roller must be taken off; — the whole cord without delay must be unwrapped, and then a second ligature be applied below the original one, (viz. nearer to the

body of the infant,) taking great care that it shall not cut through the cord when drawn very tight, but at the same time drawing it sufficiently tight to compress the vessels.

The ligature should be composed of fine linen threads, three or four thicknesses, and not of tape or bobbin, or any substance of this nature, as it cannot be relied on for this purpose.

Ulceration, or imperfect Healing of the Navel.

The cord separates from the navel generally some time between the fifth and fifteenth day from delivery, and the part usually heals without giving the slightest trouble.

This, however, is not always the case, for sometimes a thin discharge will take place, which, if the part be examined, will be found to proceed from a small growth about the size, perhaps, of a pea, or even less. This must be removed by applying a little powdered alum,—or, if this fail, it should be once or twice slightly touched with blue-stone, and afterwards dressed with calamine cerate.

At other times, though fortunately very rarely, excoriation of the navel and the parts around takes place, which quickly spreads, and assumes an angry and threatening character. If, however, the attention of the medical man is called to it early, it will always do well: until his directions are given, apply a nicely made bread and water poultice.

Bleeding from the Navel.

Sometimes, a day or two after the cord separates, or at the time of separation, bleeding takes place from the navel: fortunately, this very seldom occurs; indeed, it is very rarely met with; and I only mention it, to observe that, upon its occurrence, the point of the finger should be placed over the part, and pressure steadily applied until medical assistance is obtained.

Now and then, in these cases, a growth sprouts up and bleeds. Let this be touched with lunar caustic, or any other astringent application, or let pressure be employed, still it will bleed, —

not freely or in a stream, but there will be a constant drain from the part, and the infant, as a consequence, will waste, and be brought to death's door. Excise it, it will only make matters worse. The treatment in this case consists in simply winding a piece of very narrow tape round the growth, and then leaving it untouched. The bleeding will soon cease; the fungus will sprout over the upper margin of the tape; in a very short time it will, as it were, strangle the disease, which subsequently falling off, a complete cure is accomplished.

Jaundice.

It frequently happens, during the first or second week after birth, that the skin of the child becomes very yellow, and it has all the appearance of having the jaundice. This gives rise to great distress to the parent when she perceives it, and she becomes very anxious for the medical man's next visit.

Now, ordinarily, it is of no consequence, commonly disappearing spontaneously, and re-

quiring no medical treatment. If, however, it does not go off in two or three days, a teaspoonful of castor oil should be given once, or oftener, if necessary.

It is, of course, possible for an attack of real jaundice to occur at this early period, and a disease of a very serious nature will then have to be dealt with; but, except as a consequence of malformation (a very infrequent occurrence), it is not likely to arise; and therefore jaundice during the first and second week after delivery need not create alarm.

Tongue-tied.

From what it arises.—This arises from the bridle under the tongue being so short, or its attachment to the tongue extended so near the tip, as to interfere with the motions of the organ in sucking, and, in after years, in speaking. It is *a rare occurrence*, although nothing is more common than for medical men to have infants brought to them supposed to be labouring under the above defect.

How its existence may be determined. — The best guide for a parent to determine whether it exist or not, is for her to watch whether the infant can protrude the tip of the tongue beyond the lips: if so, it will be able to suck a good nipple readily, and nothing need or ought to be done. No mother will unnecessarily expose her infant to an operation, which, unless very carefully performed, is not altogether unattended with danger; and, if she suspects any defect of this kind to exist, she has only to observe the circumstance mentioned above, to satisfy her mind upon the subject.

Moles and Marks on the Skin, &c.

The supposed influence of the imagination of the mother, in the production of the above appearances in the texture of the skin of her infant, has been fully discussed in the author's work "Hints to Mothers, &c." This part of the subject is, however, foreign to the present inquiry, which chiefly has reference to the pro-

bable effect of their presence upon the health of the child.

They may be divided into two classes: the brownish mole, and claret-stain; and small but somewhat elevated tumours, either of a dark blue, livid colour, or of a bright vermilion hue.

Moles and Stains. — They are of no importance, as far as the health of the infant is concerned. If situated in the face, however, they frequently cause great disfigurement, as the claret-stain, which may be seen sometimes to occupy nearly half the face. But they happily do not increase in size, remaining stationary through life; and as any operation that might be proposed for their removal, would only cause an equal, if not greater, deformity, they ought to be left alone.

Coloured spots or tumours. — These vary in their number, size, and situation. The same child is sometimes born with many of them. They may be as small as a pea, or as large as a crown piece. They are not only found on the skin, but on the lips, in the mouth, &c. &c.

These, also, sometimes remain stationary in their size, having no tendency to enlarge, unless, indeed, they are subjected to friction or pressure. But as they frequently require surgical aid,— in which case, the earlier the application of remedial measures, the less severe in their kind, and the greater the probability of a speedy and successful result,— so is it *always* important for the mother *early* to obtain a medical opinion, that the measure of interference or non-interference may be decided.

SECT. II. — DISORDERS OF THE STOMACH AND BOWELS OF THE INFANT.

Indigestion, Flatulence, Vomiting, Griping, and Looseness.

Disorder of the stomach and bowels is one of the most fruitful sources of the diseases of infancy. Only prevent their derangement, and, all things being equal, the infant will be healthy

and flourish, and need not the aid of physic or physicians. Experience daily proves, that a large proportion of the children who die in infancy are lost from derangement of these organs, as the primary cause.

There are many causes which may give rise to these affections; many of them appertain to the mother's system, some to that of the infant. All are capable, to a great extent, of being prevented or remedied. It is, therefore, most important that a mother should not be ignorant or misinformed upon this subject. It is the prevention of these affections, however, that will be principally dwelt upon in this chapter; for let the mother ever bear in mind, and act upon the principle, that the prevention of disease alone belongs to her; the cure to the physician.

For the sake of clearness and reference, these disorders will be spoken of as they occur: —

To the infant at the breast.
At the period of weaning.
And to the infant brought up by hand.

1. *To the Infant at the Breast.*

UNHEALTHY MILK. — The infant's stomach and bowels may become deranged from the breast-milk becoming unwholesome.

This may arise from the parent getting out of health, a circumstance which will be so manifest to herself, and to those more immediately interested in her welfare, that it is only necessary just to allude to it here. Suffice it to say, that there are many causes of a general kind to which it may owe its origin; but that the most frequent is *undue lactation*, a subject to which reference has already been made, and the effects both upon mother and child fully dwelt upon.* To cure derangement of the bowels from this cause, a wet-nurse is the only remedy.

Anxiety of mind in the mother will cause her milk to be unhealthy in its character, and deficient in quantity, giving rise to flatulence, griping, and sometimes even convulsions in the infant.† A fit of passion in the nurse will fre-

* See page 15. † See page 25.

quently be followed by a fit of bowel complain in the child.* These causes of course are temporary, and when removed the milk becomes a healthy and sufficient for the child as before.

Sudden and great mental disturbance, however, will occasionally drive away the milk altogether, and in a few hours. A Mrs. S., æt. 21, a fine healthy woman, of a blonde complexion, was confined of a boy in October, 1836. She had a good time, and a plentiful supply of milk for the child, which she continued to suckle till the following January, a period of three months, when her milk suddenly disappeared. This circumstance puzzled the medical attendant, for he could not trace it to any physical ailment; but the milk never returned, and a wet-nurse became necessary. In the following spring the husband of this lady failed, an adversity which had been impending since the date when the breast-milk disappeared, upon which day the deranged state of the husband's affairs was made known to the wife, — a fact which at once explained the mysterious disappearance of the milk.

* See page 33.

Unwholesome articles of diet will affect the mother's milk, and derange the infant's bowels. On the 25th May, 1836, I was called to see an infant at the breast with diarrhœa. The remedial measures had but little effect so long as the infant was allowed the breast-milk; but this being discontinued, and arrow-root made with water only allowed, the complaint was quickly put a stop to. Believing that the mother's milk was impaired from some accidental cause which might now be passed, the infant was again allowed the breast. In less than four-and-twenty hours, however, the diarrhœa returned. The mother being a very healthy woman, it was suspected that some unwholesome article in her diet might be the cause. The regimen was accordingly carefully inquired into, when it appeared that porter from a neighbouring publican's had been substituted for their own for some little time past. This proved to be bad, throwing down, when left to stand a few hours, a considerable sediment; it was discontinued; good sound ale taken instead; the infant again put to the breast, upon the milk of which it flourished, and never had another attack.

In the same way *aperient medicine*, taken by the mother, will act on the child's bowels, through the effect which it produces upon her milk. This, however, is not the case with all kinds of purgative medicine, nor does the same purgative produce a like effect upon all children. It is well, therefore, for a parent to notice what aperient acts thus through her system upon that of her child, and what does not, and when an aperient becomes necessary for herself, unless she desire that the infant's bowels be moved, to avoid the latter; if otherwise, she may take the former with good effect.

Again; the return of *the monthly periods* whilst the mother is a nurse always affects the properties of the milk, more or less, deranging the stomach and bowels of the infant. It will thus frequently happen, that a few days before the mother is going to be unwell, the infant will become fretful and uneasy; its stomach will throw up the milk, and its motions will be frequent, watery, and greenish. And then, when the period is fully over, the milk will cease to purge. It is principally in the early months, however, that the infant seems to be affected by this cir-

cumstance; for it will be generally found that although the milk is certainly impaired by it, being less abundant and nutritious, still, after the third or fourth month it ceases to affect the infant. Is then a mother, because her monthly periods return after her delivery, to give up nursing? Certainly not, unless the infant's health is seriously affected by it; for she will generally find that, as the periods come round, by keeping the infant pretty much from the breast, during its continuance, and feeding him upon artificial food, she will prevent disorder of the child's health, and be able in the intervals to nurse her infant with advantage. It must be added, however, that a wet-nurse is to be resorted to rather than any risk incurred of injuring the child's health; and that, in every case, partial feeding will be necessary at a much earlier period than when a mother is not thus affected.

The milk may also be rendered less nutritive, and diminished in quantity, by the mother again becoming *pregnant*. In this case, however, the parent's health will chiefly suffer, if she persevere in nursing; this, however, will

again act prejudicially to the child. It will be wise, therefore, if pregnancy should occur, and the milk disagree with the infant, to resign the duties of a nurse, and to put the child upon a suitable artificial diet;—if, however, pregnancy should take place before the infant is six month's old, a wet-nurse ought to be procured.

FROM IRREGULAR NURSING.—This is one of the most frequent sources of derangement of the stomach and bowels of the child. The infant that is constantly at the breast will always be suffering, more or less, from flatulence, griping, looseness of the bowels, and vomiting. This is caused by a sufficient interval not being allowed between the meals for digestion. The milk, therefore, passes on from the stomach into the bowels undigested, and the effects just alluded to follow. Time must not only be given for the proper digestion of the milk, but the stomach itself must be allowed a season of repose. This evil, then, must be avoided most carefully by the mother strictly adhering to those rules for nursing which have been already laid down.*

* See page 5.

FROM TEETHING. — The bowels of the infant at the breast, as well as after it is weaned, are generally affected by teething. And it is fortunate that this is the case, for it prevents more serious affections. Indeed, the diarrhœa that occurs during dentition, except it be violent, must not be subdued; if, however, this is the case, attention must be paid to it. It will generally be found to be accompanied by a swollen gum; the freely lancing of which will sometimes alone put a stop to the looseness: further medical aid may, however, be necessary.

FROM COLD AND DAMP, ETC. — Of course there are other causes besides these already alluded to, giving rise to bowel complaints, during this epoch,—causes not cognisable by the mother, however, and not mentioned therefore here. It is right, however, that she should be aware that these affections are sometimes the result simply of impressions of cold or damp, particularly at certain seasons of the year; in the autumn, for instance, when, as is well known, bowel complaints are very frequent. When thus produced,

it is important early to seek medical aid, as inflammation is generally the result.

2. *At the Period of Weaning.*

There is great susceptibility to derangements of the stomach and bowels of the child at the period when weaning ordinarily takes place, so that great care and judgment must be exercised in effecting this object. Usually, however, the bowels are deranged during this process from one of these causes; from weaning too early, from effecting it too suddenly and abruptly, or from over-feeding and the use of improper and unsuitable food. There is another cause which also may give rise to diarrhœa at this time, independently of weaning, viz. the irritation of difficult teething.

Weaning too early. — The substitution of artificial food for the breast-milk of the mother, at a period when the digestive organs of the infant are too delicate for this change, is a frequent source of the affections now under consideration.

The attempt to wean a delicate child, for instance, when only six months old, will inevitably be followed by disorder of the stomach and bowels. Unless, therefore, a mother is obliged to resort to this measure, from becoming pregnant, or any other unavoidable cause, if she consult the welfare of her child, she will not give up nursing at this early period. But if she should be no longer competent to suckle, and her infant be delicate, a wet-nurse must be obtained; for, the infant's bowels becoming disordered, medicine or remedies will avail little without healthy breast milk.

The age at which weaning ought to take place must ever depend upon circumstances; the ninth month would not be too early for some, the twelfth would be for others.*

For sudden and abrupt alteration of diet. — Depriving the child at once of the breast, and substituting artificial food, however proper under due regulations such food may be, will invariably cause bowel complaints. Certain

* See page 51.

rules and regulations must be adopted to effect weaning safely, the details of which are given elsewhere.*

Overfeeding, and the use of improper and unwholesome food. — These causes are more productive of disorder of the stomach and bowels at the time of weaning than any yet referred to.

If too large a quantity of food is given at each meal, or the meals are too frequently repeated, in both instances the stomach will become oppressed, wearied, and deranged; part of the food, perhaps, thrown up by vomiting, whilst the remainder, not having undergone the digestive process, will pass on into the bowels, irritate its delicate lining membrane, and produce flatulence, with griping, purging, and perhaps convulsions.

Then, again, improper and unsuitable food will be followed by precisely the same effects; and unless a judicious alteration be quickly made, remedies will not only have no influence

* See page 52.

over the disease, but the cause being continued, the disease will become most seriously aggravated.

It is, therefore, of the first importance to the well-doing of the child, that at this period, when the mother is about to substitute an artificial food for that of her own breast, she should first ascertain what kind of food suits the child best, and then the precise quantity which nature demands. Many cases might be cited, where children have never had a prescription written for them, simply because, these points having been attended to, their diet has been managed with judgment and care; whilst, on the other hand, others might be referred to, whose life has been hazarded, and all but lost, simply from injudicious dietetic management. Over-feeding, and improper articles of food, are more frequently productive, in their result, of anxious hours and distressing scenes to the parent, and of danger and loss of life to the child, than almost any other causes.

Teething. — The irritation caused by difficult teething may give rise to diarrhœa at the period when the infant is weaned, independently

of the weaning itself. Such disorder of the bowels, if it manifestly occur from this cause, is a favourable circumstance, and should not be interfered with, unless indeed the attack be severe and aggravated, when medical aid becomes necessary. Slight diarrhœa then, during weaning, when it is fairly traceable to the cutting of a tooth (the heated and inflamed state of the gum will at once point to this as the source of the derangement), is of no consequence, but it must not be mistaken for disorder arising from other causes. Lancing the gum will at once, then, remove the cause, and generally cure the bowel complaint.

3. *To the Child brought up by Hand.*

Children brought up on an artificial diet are very liable to indigestion and bowel complaints; indeed none more so: and it is from these affections that so many of these infants perish. When, then, it is absolutely necessary from untoward circumstances to have recourse to this mode of nourishing the child, the rules and

regulations laid down in the section on "Artificial Feeding" must be most strictly followed out, if the parent would hope to avoid disease and rear her child.* And if these affections should at any time unfortunately manifest themselves, the mother ought carefully and diligently to examine whether the plan of feeding pursued is in every particular correct, particularly bearing in mind that the two causes most frequently productive of disorder in the child are *overfeeding* and the *exhibition of unsuitable food* — the two grand errors of the nursery. These results, however, have already been sufficiently dwelt upon as likely to take place at weaning, and they may of course occur to a child who is brought up on an artificial diet at any period.

Maternal Treatment of the Disorders of the Stomach and Bowels.

As must have been already seen, the maternal treatment chiefly consists in the removal of the

* See page 34.

cause of the disorder; medicine may occasionally be exhibited by the mother, but its use in her hands must be very limited indeed.

Unfortunately the general resource and only remedy of most mothers in affections of the stomach and bowels is an aperient, and a combination containing calomel is the one too frequently selected. The primary cause of the disorder is undetected, and consequently no measures taken for its removal, but purgative powder after purgative powder is given, the evil being supposed to rest in the bowels alone, and that such means must eventually get rid of it. The mother is not aware all this time that the real source of the derangement is probably in the diet itself; that there is some error here, and that unless this is corrected, the remedies must be worse than useless. The consequence of such a plan of proceeding is usually very sad: a confirmed and obstinate diarrhœa but too commonly ensues, and the infant is sometimes reduced to the last extremity.

The removal of the cause of the disorder, then, in a large number of instances of derangement of the stomach and bowels, if effected

early, will cure the disease, and without further remedy. But it will be asked, by what method is this cause to be detected? In this way. In all human probability the primary cause of the disorder is connected with the diet; this is the case in ninety-nine instances out of a hundred. Well, then, is the sick child at the breast? If so, ascertain whether the breast-milk is healthy and wholesome, or whether any circumstances exist which have rendered it otherwise? If nothing faulty is found here, the next question would naturally be, whether the rules and regulations laid down for suckling have been strictly adhered to? Or, whether the infant is sufficiently old to render it at all probable that a tooth may be irritating the gum?

Perhaps the child is being weaned; well, is there any error here? Is the change being attempted too early? or too suddenly and abruptly? If this is not the case, then, has the child been overfed, or is the food given of the proper description?

Is the child being brought up by hand? Then, there is every reason to suspect, either that the quality of the food given is not the

most suitable, or, that the quantity exhibited is too great; in fact, that the rules laid down for "artificial feeding" have not been strictly acted upon.

By a mode of investigation like this, any defect or error in the dietetic management of the infant producing the disorder will be easily detected by a careful mother; and its correction alone will, in very many instances, be all that is necessary to remove the symptoms.

For example, if *flatulence and griping*, followed by diarrhœa, occur *to an infant at the breast;* if at the same time it becomes pale, its flesh flabby, its disposition fretful, always crying until it is put to the breast, the nipple of which it grasps eagerly, sucking eagerly, yet never satisfied, for its hunger continues, it is not nourished; if, too, the more it sucks, the more the stomach and bowels are deranged, the more it vomits and is purged; depend upon it the cause of all the evil will be found to be unwholesome milk. No medicine will avail any thing here; the cause must be removed; the best medicine, and the only remedy, is a breast of healthy milk. And if this is not procured

early, there will be great danger of a diarrhœa setting in, which may probably prove fatal to the child.

Again; if there is simply *vomiting* of the breast-milk almost immediately after the child has been suckled, the milk coming up pure and unchanged, and discharged without any apparent effort, and the moment after the child is cheerful and happy, this will be found to depend upon repletion, and not upon unwholesome milk; in fact, the stomach has received too much. This must be prevented in future, not by giving medicine, but simply by removing the infant from the nipple immediately it ceases to draw strongly, the moment it begins to dally with the breast.

Again; *if flatulence and griping* occur *to the child brought up by hand*, this derangement will generally be found to result from overfeeding: abstinence and diminution of the quantity of the food will generally be all that is necessary here. It will be well, however, for the mother in this case, and she may do it with the utmost safety, to unload the bowels of their indigestible contents by the exhibition of a tea-spoonful

of castor oil. A dose or two of this medicine will effectually clear them out, without increasing the irritation, or weakening the child, whilst it will in most instances altogether remove the symptoms. If the flatulence, however, should continue, four or five grains of magnesia may be mixed with the last meal at night, and a little warm water thrown up into the bowel as an injection the next morning.

Diarrhœa occurring in a child brought up by hand, if it be not the result of overfeeding, will very frequently be found to arise from unsuitable diet, the food given not being of a kind suited to the infant's stomach; for what will agree with one child often disagrees with another. Alteration of diet will sometimes alone suffice in these cases to cure, if this alteration is only made early enough, before any considerable irritation of the stomach and bowels has been induced. Thin arrow-root made with water (prepared very carefully, or the child will refuse it,) should be given for five or six days; the warm bath used every night for the same period, a new flannel bandage rolled round the body, and the child cautiously protected from a

damp atmosphere. The arrow-root, upon the cessation of the diarrhœa, may have cows' milk added to it, if milk is not found to disagree: when this is the case, chicken or weak mutton broth, free from fat, or beef-tea, thickened with farinaceous food, with a little salt added, are the best substitutes. Should not the diarrhœa yield to the foregoing measures, and that readily, medical aid ought to be sought. Diarrhœa is very frequent from the time of weaning to the third year of age, and certainly in its effects forms so important a disease, that, unless in the slight form noticed above, a mother is not justified in attempting its relief.

In conclusion, I would observe, that I do not think a mother justified in attempting more than what has been laid down here for her guidance. It is believed that the few and plain common-sense directions given, if followed, will do much to prevent disease, and even to relieve it in its milder forms; they will not, however, cure disease itself when really established: and again I would repeat, let the mother recollect that to prevent disease is her province—to cure it, is the physician's.

SECT. III. — COSTIVENESS.

1. *In Infancy.*

The principle to act upon in the management of the infant's bowels is this, — that they should be kept free, and by the mildest and least irritating means.

If therefore they become *accidentally* confined (less than two stools in the four-and-twenty hours), and the infant is suckled, the mother may ascertain whether an aperient taken by herself will render her milk of a sufficiently purgative quality to act upon the bowels of her child. This is the mildest mode of all.

If, however, this does not answer, or is not practicable from the child being fed artificially, then the mildest aperient medicines must be chosen to accomplish this purpose. The kind of medicine to be selected, and the doses in which to be adminstered, will be found in the section on "Aperient Medicine." *

* See page 97.

If, however, the bowels of the infant are disposed to be *habitually* confined, it should be ascertained whether this may not be dependent upon its diet. The same food that agrees perfectly well with one child will frequently cause costiveness in another. An intelligent and observing mother will soon discover whether this is the source of the mischief, or not. Boiled milk, for instance, will invariably cause confined bowels in some children; the same result will follow sago boiled in beef tea, with others; whilst, on the other hand, the bowels may frequently be brought into regular order, and their confined state overcome, by changing the food to Leman's tops and bottoms steeped in hot water, and a small quantity of unboiled milk added; or prepared barley, mixed in warm water and unboiled milk, will have the same effect.

Sometimes children are *constitutionally* costive, that is, the bowels are relieved every third or fourth day, not oftener, and yet perfect health is enjoyed. This occasionally will happen in large families, all the children, though perfectly healthy and robust, being similarly affected. When such is found by a mother to be really

the habit of her child, it would be very unwise, because injurious to its health, to attempt by purgatives to obtain more frequent relief. At the same time it will be prudent and necessary for her to watch that the regular time is not exceeded. This condition seldom occurs to the very young infant.

2. *In Childhood.*

Children of sound health, who are judiciously fed, and have sufficient exercise, very seldom need aperient medicine. Errors in diet, a want of proper attention to the state of the skin, insufficiency of air and exercise, in fine, a neglect of those general principles which have been laid down for the management of health, and upon the observance of which the due and healthy performance of every function of the body depends, are the sources of bowel derangements, and particularly, at this age, of costiveness.

I feel assured, however, that some children are more troubled with costiveness than others,

from the simple but important circumstance of their not being early taught the habit of relieving the bowels daily, and at a certain hour. There is a natural tendency to this periodical relief of the system, and it exists at the earliest age. And if the mother only cause this habit to be fairly established in infancy, she will do much towards promoting regularity of her child's bowels throughout life. The recollection of this fact, and the mother's acting upon it, is of the greatest importance to the future health and comfort of her children.

If the bowels are *accidentally* confined at this age, castor oil is certainly the best aperient that can be given: it acts mildly but efficiently, clearing out the bowels without irritating them. The dose must be regulated by the age, as also by the effect that aperients generally have upon the individual. Great care must in future be taken to avoid the cause or accidental circumstance which produced the irregularity.

When the bowels are *habitually* costive, much care and judgment is necessary for their relief and future management. Fortunately this condition is very rare in youth. The activity and

exposure to the air, usual at this period of life, render purgatives unnecessary, unless, indeed (as just mentioned), some error in diet, or some unusual circumstance, render them accidentally confined. Should, however, the foregoing state exist, medicine alone will avail little; there are certain general measures which must also be acted up to, and most strictly, if the end is to be accomplished. They consist, principally, in an observance of great regularity with respect to the time of taking food, its quality, quantity, and due mastication; regular and sufficient exercise, horse exercise being particularly serviceable; the shower-bath, or daily ablution; early rising (the indulgence in the habit of lying in bed always predisposing to constipation); and, lastly, the patient habituating himself to evacuate the bowels at a certain hour of the day. After breakfast appears to be the time when the bowels are more disposed to act than at any other part of the day; this is the time, then, that should be chosen.

All these points must be sedulously observed, and upon the principles laid down in the various

chapters upon these subjects, if habitual costiveness is expected to be overcome.

SECT. IV. — WORMS.

NOT SO FREQUENT AS POPULARLY SUPPOSED; AN ERROR PRODUCTIVE OF MISCHIEF. — Almost all diseases have been, at one time or other, attributed to the generation of worms in the intestines. And at the present day it is not at all an uncommon occurrence for medical men to be called in to prescribe for children, to whom the strongest purgative quack medicines have been previously exhibited by parents, for the removal of symptoms which, upon investigation, are found in no way connected with or produced by worms. The results of such errors are always, more or less, mischievous, and sometimes of so serious a nature as to lay the foundation of disease which ultimately proves fatal. This observation, moreover, it behoves a mother carefully to regard, since the symptoms, popularly supposed to indicate the existence of worms, are so deceptive, (and none more so

than that which is usually so much depended upon — the picking of the nose,) that it may be positively asserted to be impossible for an unprofessional person to form a correct and sound opinion in any of these cases.

It was at one time imagined, and the idea is still popularly current, that worms were the occasion of a troublesome and lingering species of fever, which was therefore designated worm-fever. This notion is now entirely exploded; for if worms be present under such circumstances, it is a mere accidental complication; the fever referred to being generally of a remitting character, and neither caused by or causing the generation of worms. The symptoms of this fever, however, have led and continue to lead very many astray. This is not surprising, since they so closely resemble those which characterise the presence of worms, that an unprofessional person is almost sure to be misled by them. Amongst other symptoms, there is the picking of the nose and lips, offensive breath, occasional vomiting, deranged bowels, pain in the head and belly, with a tumid and swollen condition of the latter, a short dry cough, wasting of the

flesh, &c.; symptoms continually attendant upon the disorder now under consideration. These cases have hitherto been perpetually looked upon by mothers as worm-cases, and after having been treated by them as such, by the use of the popular worm-powders of the day, have, as perpetually, presented themselves to the physician greatly and grievously aggravated by such injudicious treatment. It is folly, at any time, for an unprofessional person to prescribe for a case where worms are actually known to exist: surely where there is any doubt upon the latter point it must be greater folly still.

The infant at the breast is seldom, if ever, the subject of this disorder, whilst an artificial diet, or bringing up by hand, predisposes to it. Worms most frequently occur, however, during childhood; much more so at this epoch than in adult age. They do not invariably occasion indisposition, for they are now and then passed without pain or distress by children who are in the enjoyment of perfect health, and in whom previously there was not the slightest suspicion of their existence. The idea, formerly so prevalent, of their being attended with danger, is

without foundation; for unless the case be mismanaged, they rarely give rise to serious consequences.

HOW PRODUCED, AND HOW BEST PREVENTED. — The causes of worms it is not very easy to explain; at the same time it is very certain that some known circumstances favour their production.

If the general health of a child be enfeebled, particularly if the child be strumous, such a condition will favour the generation of these animals. The protracted use of unwholesome and innutritious articles of food, or a deficient supply of salt (the most necessary stimulant to the digestive organs), or other condiments, predisposes to worms. This observation is strikingly illustrated by an occurrence which formerly took place in Holland, where an ancient law existed forbidding salt in the bread of certain criminals; they were in consequence horribly infested with worms, and quickly died. Sugar, too, whilst a necessary condiment for the food of children, if given in the form of sweetmeats, and their indulgence,

long persisted in, may so enfeeble the organs of digestion as to cause worms. And, lastly, (though many other causes might be referred to) the injudicious means occasionally employed to effect the removal of these animals, by the debility produced in the intestinal canal, favours not only their re-appearance but their increase.

These, then, are so many causes which may occasion worms in the child, and of course the best and most effectual method to prevent their production is their avoidance. A mother, therefore, should at all times be careful in the regulation of the diet and general management of her child's habits and health, even if no stronger obligations existed than the dread of this disorder; and she must be more than ordinarily vigilant on this head, when the slightest disposition to such disorder is manifested. Again; she must not forget that the symptoms so commonly ascribed as characteristic of worms are much more frequently caused by other diseases; that at no time, therefore, is she justified in giving worm powders, or strong doses of medicine for such symptoms; for if they do

exist, their use is always attended with risk, and if they do not, the debility which they occasion in the stomach and bowels may itself become the source of their production.

SECT. V. — SCARLET FEVER.

There are several varieties of this disease; it will be more perspicuous, however, for our purpose to speak of it under the two following forms: —

Mild scarlet fever;
Scarlet fever, with sore throat.

MILD SCARLET FEVER.— In this form of the disease there is only the rash with fever.

Symptoms. — The anticipating symptoms are those of fever: they precede the eruption. The degree of fever, however, is variable; for the symptoms are sometimes so moderate as scarcely to attract attention, — slight and irregular shivering, nausea, perhaps vomiting, thirst, and

heat of skin; whilst, at others, there is considerable constitutional disturbance, indicated by pungent heat of skin, flushing of the face, suffusion of the eyes, pain in the head, great anxiety and restlessness, and occasionally slight delirium.

These symptoms are followed on the second day (in the majority of instances) by the rash. This first appears in numerous specks or minute patches of a vivid red colour on the face, neck, and chest. In about four-and-twenty hours it becomes gradually diffused over the whole trunk. On the following day (the third) it extends to the upper and lower extremities, so that at this period the whole surface of the body is of a bright red colour, hot and dry. The efflorescence, too, is not always confined to the skin, but occasionally tinges the inside of the lips, cheeks, palate, throat, nostrils, and even the internal surface of the eyelids. Sometimes the efflorescence is continuous and universal; but more generally on the trunk of the body there are intervals of a natural hue between the patches, with papulous dots scattered over them, the colour being most deep on the loins and neigh-

bouring parts, at the flexure of the joints, and upon those parts of the body which are subjected to pressure. It is also generally most vivid in the evening, gradually becoming paler towards morning.

The eruption is at its height on the fourth day;—it begins to decline on the fifth, when the interstices widen, and the florid hue fades;—on the sixth, the rash is very indistinct; and on the eighth day it is wholly gone.

The various symptoms with which the eruption is accompanied, gradually disappear with the efflorescence; but the tongue still remains morbidly red and clean. The peeling off of the cuticle (the outer layer of the skin), which begins about the end of the fifth day on the parts on which the eruption first appeared, proceeds; so that about the eighth or ninth, portions of the cuticle are thrown off, the thickest and largest being those detached from the skin of the hands and feet.

SCARLET FEVER, WITH SORE THROAT.—In this form of the disease, the fever and rash are accompanied with inflammation of the throat.

Symptoms. — The symptoms are more severe than in the mild form of this disease, and, in the majority of instances, the inflammation of the throat appears with the eruption, and goes through its progress of increase and decline with the cutaneous eruption. Sometimes, however, it precedes the fever; whilst at others it does not appear until the rash is at its height.

It is generally in the course of the second day that the child complains of considerable stiffness in the muscles of the neck, extending to the lower jaw, and under the ears; — of a roughness of the throat, and difficulty in swallowing; — and some degree of hoarseness will be noticed: all so many indications that the throat is affected. Very shortly, an increased secretion of the mucus of these parts occurs, and, collecting about the tonsils, aggravates the child's sufferings, from the frequent and ineffectual efforts made to expel it. If the inflammatory action be more severe, exudations of lymph will also be poured out, and intermingling with the mucus, greatly augment the difficulty of swallowing. At this time the lining mem-

brane of the mouth, as also the tongue, assume a florid red colour; the red points of the latter becoming much elongated.

The febrile symptoms are severe from the first; amongst others, there will be headach, sometimes accompanied by slight delirium, nausea, intense heat of skin, languor, and considerable inquietude and anxiety: and as the inflammation approaches its height, the fever increases, the pulse rises, the breathing becomes oppressed, the skin becomes more pungently hot and dry, and the thirst urgent. All these symptoms being increased towards evening, when the febrile restlessness is often succeeded by delirium.

The rash is seldom perceptible before the third day, and then comes out in irregular patches on various parts of the body, particularly about the elbows and wrists; thus differing as to the time and mode of its appearance, from the mild form of the disease. It frequently recedes, or entirely vanishes, the day after it first comes out, and then reappears partially, and at uncertain times. This generally pro-

tracts the duration of the disorder, without, however, producing any perceptible change in the other symptoms. On the fifth or sixth day of the disease, the fever and inflammation of the throat begin to abate; at the same time the rash declines, and the peeling off of the cuticle soon follows.

This is the ordinary course of scarlet fever with sore throat; but in many cases the symptoms run still higher, and the disease is alarmingly dangerous from its commencement. In some instances, there is an acrid discharge from the nostrils or ears, often accompanied with deafness; as also enlargements of the glands in the neck, followed by the formation of abscesses in their immediate neighbourhood. It is unnecessary, however, to follow out the symptoms of scarlet fever more fully; as all that has been attempted here, has been so to sketch out the more prominent symptoms of this disease, that the directions upon the parental management may be readily comprehended: they will be very brief, but a strict attention thereto will be found all-important to the well-doing and comfort of the child.

CHARACTER OF SCARLET FEVER COMPARED WITH THAT OF MEASLES. — It will be seldom difficult to distinguish this disease from other acute eruptive disorders. The one to which it bears the greatest resemblance is the measles; but from this it is readily distinguished by the absence of the cough, the inflamed and watery eye, running at the nose and sneezing, which are the predominant symptoms in the early stage of the measles; but which do not usually attend on scarlet fever — at least, in any high degree. In measles, also, there is an absence of that restlessness, anxiety, and depression of spirits, by which scarlet fever is peculiarly distinguished. — The rash, too, in measles, does not appear till two or three days later than that of scarlet fever. It also differs in its characters. *In scarlet fever*, the eruption consists of innumerable minute dots or points, diffused in patches with uneven edges of various sizes and forms; and gives to those portions of the skin on which it appears, a diffused bright red colour. *In measles*, the rash comes out in irregular semilunar or crescentic shaped patches, distinctly

elevated; the spots being of a deeper red in the centre than in the circumference, and leaving intervening spaces in which the skin retains its natural pale colour.

MATERNAL MANAGEMENT.—The chief points to which the parent's attention must be directed, irrespective of a strict attention to the more immediate medical treatment directed by the physician, are the following: —

Ventilation of the bed-room. — Even in the mildest cases, the child must be kept in bed from the first accession of the fever. He must not be loaded, however, as was formerly the practice, with a quantity of bed-clothes, in order to encourage the fever and increase the quantity of eruption. A moderate quantity of clothing is all that is required, adapted to the heat of skin and feelings of the patient.

The bed-room must be kept cool and well ventilated. This is of importance in the mildest cases; but in the more severe forms of this disease, in which the throat is much affected, the

constant and free admission of pure air will have a most decided and marked good effect upon the symptoms. The air should be renewed, therefore, from time to time. The linen, both of the bed and the patient, should also be frequently changed — daily, if practicable.

However mild the symptoms of this disease may be at the commencement, the child must always be carefully and vigilantly watched by the parent, as inflammation of some internal organ may suddenly arise (which is generally indicated by symptoms sufficiently obvious), and thus change an apparently mild form of this disease into one of an alarming character.

Cold sponging. — Whenever the skin is pungently hot and dry, the whole surface of the body should be sponged with cold water, or with vinegar and water. The heat is by this means rapidly abstracted, and the child refreshed; and this may again and again be resorted to, as the heat again returns. By this application alone, " the pulse has been diminished in frequency, the thirst has abated, the tongue has become moist, a general free per-

spiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep. In all these respects, the condition of the patient presented a complete contrast to that which preceded the cold washing; and his languor was exchanged for a considerable share of vigour. The morbid heat, it is true, when thus removed, is liable to return, and with it the distressing symptoms; but a repetition of the remedy is followed by the same beneficial effects as at first."*

Gargles and the inhalation of warm water.— When the throat is affected, gargles are sometimes ordered; but the pain and inconvenience which their employment gives rise to, frequently precludes their use: and children seldom understand how to employ them, even if the state of the throat permitted it. Under these circumstances, the inhalation of the steam of hot water, or hot vinegar and water, may be substituted, and with decided benefit. Mudge's inhaler is a good contrivance to effect this.

* Bateman's Practical Synopsis of Cutaneous Diseases.

When the throat is found by the mother to be early affected, an immediate application to the medical adviser is especially important. For, if he be called upon to treat this form of scarlet fever at its very commencement, by judicious treatment, the duration and violence of the disease may be both shortened and greatly mitigated.

Regimen. — Cooling drinks, as plain water, toast and water, barley water flavoured with lemon peel, fresh whey, lemonade, and thin gruel, may all be resorted to in their turn. The child may also be allowed oranges, grapes, or lemons sweetened with sugar, particularly when the mouth is foul and dry; but care must be taken that neither the pulp nor the stones are swallowed. These will both refresh and feed the patient as much as is necessary until the decline of the disease. The parent must strictly forbid the attendants in the sick chamber giving, at this period, any heating or stimulating fluid, as also animal food; and this injunction must be strictly regarded, even in the mildest form of the disease.

When the child is convalescent, mild nourishment will be required, such as arrow-root, tapioca, chicken or mutton broth, beef tea, jellies, and roasted apples; and by and by a mutton chop. Wine is seldom necessary, except under circumstances of unusual debility after a protracted illness, when its moderate use tends much to assist the convalescence; but, if given unadvisedly, there will be great hazard of exciting internal inflammatory disease.

Relapses are sometimes caused by the child getting about too soon, and by indulgence of the appetite, particularly for food: a proper degree of restraint, therefore, must be placed upon the child by the parent, who cannot too strictly carry out the directions of the medical attendant upon the diet and regimen during this period.

Great attention must still be paid to the state of the bowels, and, indeed, to all the secretions and excretions.

Peeling off of the cuticle, and falling off of the hair. — To promote the more easy separation of the cuticle from the surface of the body, a

warm or tepid bath may be usefully employed at the close of the disease. It will, moreover, greatly contribute to the comfort of the child, and induce a more healthy condition of the skin. Occasionally the cuticle of the whole hand and fingers will peel off unbroken, when it will resemble precisely a glove in shape.

As is the case in all fevers, more or less, so particularly after scarlet fever, there is a great tendency to the falling off of the hair. It will be always well, therefore, to shave the head at this time, and exhibit daily a tepid shower bath, as early as the strength of the child will permit.

Cautions, &c. — The contagious character of this disease requires the separation of the invalid from the rest of the family; and, when it is practicable, the children should be removed to a distance. This measure is imperatively called for, when the form of the disease is very severe in its character.

Great caution must also be exercised, after the convalescence of the patient, that the other children are not brought into too early contact

with him: for infection may be thus produced, though several weeks may have elapsed from the period of the peeling off of the skin.

The period at which the disease shows itself after the exposure of an individual to sources of contagion, is exceedingly various. One child will be seized within a few hours; another, not for some days; and now and then (though rarely), five or six weeks have intervened between the period of exposure and the manifestation of the disease.

When this disease is rife in a family, it will frequently affect the individuals composing it very differently. Some escape altogether;—others have the mild form of the complaint;—others the severe;—and, again, the attendant in the sick room may be attacked with the sore throat and fever only, both of which may subside without any appearance of a rash.

In conclusion, this disease is a complaint of infancy and childhood, rather than of adult age; generally affects the same individual but once during his life; and, though examples of a second attack have occurred, such a circumstance is extremely rare.

SECT. VI. — MEASLES.

Measles consists of a fever, in which the mucous lining of the air-passages is principally affected, and which, after about three days' duration, results in an eruption of a red rash over the surface.

It depends upon a specific contagion;—occurs most frequently during childhood and adolescence, though no age is exempt from it;—and affects the system but once; a peculiarity to which an exception is very rare, proved by the few instances of the kind which have been recorded.

The period at which the disease manifests itself after infection is various,—generally about the ninth day; it has, however, been delayed until the sixteenth.

Description of the Disease. — The child infected will be observed not to be as well as usual, less active, and out of spirits; his appetite

will fail, and his sleep be restless and disturbed. It will soon be evident that he has apparently taken a cold in his head, and that this is accompanied by fever. His voice will be hoarse; there will be frequent cough, headach, sneezing, running from the nose and eyes, — the eyelids being somewhat swollen, and the eyes inflamed; — the skin will be hot and dry, and he will complain of occasional chilliness. In the course of the next two or three days, these symptoms will increase in severity, and perhaps be accompanied by oppression at the chest and hurried breathing, and towards evening by slight delirium.

On the fourth day, the rash will appear, but the symptoms will be little, if at all, mitigated; indeed, they will sometimes increase in severity. The eruption will first be perceived about the head and face, in the form of small red spots, at first distinct from each other, but soon coalescing, and forming patches of an irregular crescent-like or semilunar figure, of a dull red colour, and slightly elevated (giving a sensation of hardness to the finger), while portions of the skin intervening between them will retain their natural appearance. At this time the eruption

will also be found on the inside of the mouth and throat, and the hoarseness will consequently increase.

On the fifth day, the rash usually covers the whole surface of the body, with the exception of the legs and feet; and is now very vivid on the face, which is not unfrequently so much swelled, especially the eyelids, that the eyes are quite closed up, as in small-pox. On the sixth day, it is fully out on the extremities, and is beginning to fade on the face. On the eighth, it is fading from all parts; on the ninth, it is hardly perceptible; and has entirely disappeared on the tenth day from the commencement of the fever, or the sixth from its own first appearance. As the fading proceeds, the spots drop off in the form of little branny scales, which are sometimes, from their minuteness, scarcely perceptible. They leave a slight discolouration on the skin, with considerable itching.

Such is the ordinary course of this disease; occasionally, however, deviations are met with.

CHARACTER OF MEASLES COMPARED WITH SCARLET FEVER AND SMALL-POX.—Under the

description given of Scarlet Fever, are noticed several signs by which that disease may be distinguished from measles: to these may be added the absence of cough, of water flowing from the eyes, and of redness and swelling of the eyelids as in measles. Again, in measles, the eruption is more pointed, of a crimson instead of a scarlet hue, and does not appear until two days later than in scarlet fever.

In small-pox, the fever abates as soon as the eruption makes its appearance. In scarlet fever, this is by no means the case; and as little so in measles: the vomiting, indeed, subsides; but the cough, fever, and headach grow more violent; and the difficulty of breathing, weakness of the eyes, and, indeed, all the catarrhal symptoms, remain without any abatement till the eruption has all but completed its course.

Maternal Management. — Measles, in its ordinary and simple form, is a mild, and by no means dangerous, disease: it is sometimes, however, accompanied or immediately followed by symptoms of a very serious character, and which,

it is to be feared, in many instances, owe their origin to the carelessness of the attendants in the sick chamber. A mother's superintendence, therefore, is much required at this time to insure a careful attention to the medical directions, as also to those general points of management upon which the well-doing of her child much depend, of which the following are the most important: —

Ventilation of the Bed-room, &c. — The child must be kept in bed from the onset of the attack. He must have so much clothing only as will secure his comfort, avoiding equally too much heat or exposure to cold. To these points the parent's attention must be particularly directed. It is the practice with some nurses, in the belief that a breath of cool air is most pernicious, to keep the child constantly enveloped in a smothering heap of bed-clothes, with curtains closely drawn, and the room well heated by fire, by which means the fever and all its concomitant dangers are greatly augmented. It is equally a popular error (and yet by many it is still held and acted upon) to suppose that

because in small-pox exposure to cold is useful, that therefore it must be of equal advantage in measles. It cannot be too generally known that the nature of the fevers accompanying the two diseases are widely different, and that the adoption of this error is productive of the most serious consequences; for it would most likely produce in measles inflammation of the lungs, which, in truth, is commonly the result of carelessness upon this point.

The bed-room should be large and airy; free from currents of cold, but well ventilated, and not hot. The room, also, must be darkened, on account of the tenderness of the eyes; all noise excluded, and mental excitement or irritation carefully avoided.

Regimen.—Little or no food must be allowed, and whatever is taken must be of the simplest kind, and in a liquid form. Mild mucilaginous drinks, and *warm*, may be given liberally; as barley-water, or thin gruel, &c.

Sponging, &c.—The face, chest, arms, and hands should be sponged occasionally with

vinegar and *warm* water (one fourth and three fourths). This will be productive of great comfort to the little patient; it removes the heat, dryness, and itching of the skin, which are often very distressing; and is especially useful at night in relieving wakefulness. If the cough be troublesome, it will be useful for the child to breathe the steam of warm water; not through an inhaler, but over a large basin, with the head covered with flannel large enough to hang over its edges. By this means the tender and inflamed eyes will at the same time derive advantage from the soothing effect of the vapour.

Cautions. — Whenever the measles is known to be prevalent in a neighbourhood, and a child manifests symptoms of cold in the head and fever, it should at once be a reason for carefulness on the part of the parent. The diet should be light, cooling, and scanty; and the child should be carefully kept in doors.

It has been before remarked, that in its ordinary course measles is a disease unaccompanied with danger, but that the mildest form may be speedily converted into the most dangerous. That is to say, a sudden change may take place

in the symptoms, arising out of circumstances which could not have been foreseen, and therefore unavoidable; or may be produced by improper management on the part of the nurse, such as the giving of stimulants, by too much heat, or by exposure to cold. Now it is for the parent early to notice any change which may occur from the first source, and by her watchfulness to guard against the possibility of its arising from either of the second.

In reference to the first, if the child should complain at any period of the disease of severe headach, with piercing pain through the temples, and if this is accompanied by wandering of mind, great increase of suffusion of the eyes, as also intolerance of light, the immediate attention of the medical man is demanded. So, if towards *the close* of the eruption, that is, from the seventh to the ninth day, the breathing should *again* become hurried (this symptom is very generally present during *the height* of the eruption, and is not necessarily connected with disease of the lungs), with pain and oppression felt at the chest, the cough becoming hacking and incessant, &c. (all symptoms cognizable by the

mother, and indicative of inflammation of the lungs), no time must be lost in seeking medical aid.

With regard to the last cause (improper management), it may be well, in reference to it, to observe, that it sometimes happens that the rash comes out imperfectly, or, having appeared properly, suddenly retrocedes and disappears; and that under such circumstances the nurse will almost certainly, if not well watched, give the child "a good dose of sulphur in diluted spirit, or a glass of punch containing saffron," which are considered specifics for bringing out the eruption. Nothing can be more injurious than such remedies, for generally the disappearance of the rash will be dependent upon the existence of some internal inflammation, or of too high a fever; for the removal of which the medical man ought to be instantly applied to. Sometimes, however, it may be fairly traced to a careless exposure to cold: under such circumstances the child should be instantly, and without hesitation, put into the warm bath.

Measles are frequently followed by cough, and deranged bowels; and there is always great

susceptibility about the child for some time. On this account he should be carefully screened from a cold or damp atmosphere; the diet should be carefully regulated; and flannel worn next to the skin. If the cough should continue, it must not be neglected on the supposition that it will wear off; for it demands the skilful and careful attention of the medical man.

In conclusion, it may be remarked that very frequently during infancy and childhood, and particularly during the period of teething, eruptions very similar in appearance to this disease occur; unless, however, they are accompanied by the specific fever, and run the regular course, they may at once be decided upon as not being the measles.

SECT. VII. — SMALL-POX.

This disease, the most dreaded of all eruptive fevers, is not so commonly met with in the present day as formerly; thanks to that Providence

which led to the discovery of Jenner. But although its occurrence is not so frequent, it still does occasionally present itself; when it will assume either a mild or severe form. If it attack a child that has not previously been vaccinated, it is called natural small-pox; and the chances are that the disorder will be severe in character; — if, on the other hand, it occur in the vaccinated, the disease will generally be much modified in its symptoms; the attack will be mild, and without danger.

NATURAL SMALL-POX. — The infection of small-pox having been received into the system of a child that has not been vaccinated, fourteen days (on an average) will transpire before the commencement of the febrile symptoms, or eruptive fever. A distinct rigor or shivering fit then takes place, accompanied by pain in the back or in the stomach, with sickness, giddiness, or headach; as also great drowsiness. And if an infant be the subject of the disease, a convulsive fit will sometimes take place, or several in succession.

At the end of eight-and-forty hours from the

occurrence of the rigor (in the majority of cases), the eruption comes out; and shows itself first on the face and neck in minute flea-bite spots. In the course of the next four-and-twenty hours in some cases, and in others not until the expiration of two or three days, it completely covers the body; not being confined exclusively to the skin, but frequently extending to the mouth and throat, and even to the external membrane of the eye.

In the course of two or three days from their first appearance the little pimples, increasing in size, will be found to contain a thin transparent fluid, to pit or become depressed in their centre, and the skin in the spaces between them will be found red. On the seventh or eighth day from the commencement of the fever, the fluid contained in the pimples will be no longer transparent, but opaque; and they will consequently appear white, or of a light straw colour. Each pimple or pock will be no longer depressed in its centre, but will become raised and pointed, being more fully distended by the increased quantity of fluid within; and the skin around each pock will now be of a bright crimson. The

head, face, hands, and wherever else the eruption shows itself, gradually swell; and the eyelids are often so much distended as to close the eyes and produce temporary blindness. There will always at this time be some degree of fever present, and its amount will vary with the circumstances of each individual case. The skin too will be very tender, so much so sometimes as greatly to harass and distress the child.

On the eleventh day the swelling and inflam- of the skin of the body and face subside; the pimples upon these parts dry up and form scabs, which fall off about the fourteenth or fifteenth day. Those on the hands, as they come out later, commonly continue a short time longer. The eruption leaves behind, in some cases, the peculiar marks of the disease; and in others merely discoloured spots, which disappear in the progress of a short time.

The natural small-pox is sometimes much more severe in its character than the foregoing, and what is called *confluent* small-pox is said to exist. This form will be marked by great constitutional disturbance, and the eruption coming out earlier than in the milder form; instead of

being distinct, that is, each pimple standing distinct and separate one from the other, they will coalesce, and appear flat and doughy, not prominent: they will more particularly run into each other on the face, where they will form one continuous bag, which soon becoming a sore, will discharge copiously.

SMALL-POX IN THE VACCINATED. — When small-pox occurs to those that have been formerly vaccinated, the disease, in almost every instance, is much altered or modified in its character. Indeed in children, in whom of course vaccination has been but comparatively lately performed, small-pox when it occurs will, in the majority of cases, be so mild that the real nature of the disease will be with difficulty determined: so mild, that again and again has a parent been heard to exclaim, "Surely these few scattered pimples cannot be the small-pox!" If, however, as the pimples progress, they are narrowly watched, and are seen to become depressed in their centre; if there has been the precursory rigor, &c.; and if the source of the disorder can be traced to some case of undoubted

small-pox, the child in fact having been exposed to contagion, no doubt ought to exist in reference to the nature of such a case, however slight may be the character of the disease.

The usual progress, however, of small-pox modified by vaccination is as follows. The first stage is the same usually as in the natural form of the disease. As soon, however, as the eruption appears, the modifying power of the vaccination becomes apparent. The eruption will be found to be generally both less in quantity and more limited in its extent; or if even it should come out profusely, and cover a large extent of the surface of the body, still the controuling power of the vaccination will immediately show itself after its appearance, — first, in the complete subsidence of all the febrile symptoms which will now take place; and, secondly, in reference to the eruption, part of which will die away at once, and the remainder will by the fifth day be filled with the opaque yellowish fluid, then dry up, becoming hard and horny, and falling off will leave a mottled red appearance of the skin, and now and then slight pitting.

Such is the usual progress of the disease: subsequent to vaccination, it is a mild and tractable disorder. It is right, however, to mention that small-pox has occurred even to the vaccinated in almost as severe a form as the confluent natural small-pox, and running its regular course unaltered or unmodified. Such instances, however, are extremely rare, and form the exceptions to the general rule; for "no reasonable doubt can be entertained, from the abundance of facts now before the world, that such modification is the *law* of the animal economy, and that the regular or natural progress is the *exception*."

MATERNAL MANAGEMENT.—The grand principle in the treatment of small-pox is to moderate and keep under the fever; and however the plans adopted by different medical men may vary in particular points to accomplish this purpose, they uniformly make this principle their chief aim and object. To carry out this intention, however, the medical adviser is greatly dependent upon the aid and assistance of a judicious parent, and without this it is impossible

to hope for a successful issue to the case. A clear knowledge, therefore, of those points of general management in which in fact a great part of the above principle consists (few and simple as these directions are), it must be all-important for the mother to be acquainted with; for the rest, she must and ought to look to the medical man.

In the more rare and severe form of this disease, viz. the confluent small-pox, although in some instances it runs the same course as the milder form, the distinct or natural small-pox, still, usually, the constitutional symptoms are much more aggravated, and the medical and general treatment required will so much depend upon the character of the individual case, that we do not think it well to notice it here.

Bed and Bed-room.— It will not be necessary at first for the child to be confined to his bed, but generally about the third or fourth day he will gladly resort to it; and if he does not, it will be prudent to keep him there. He must not, however, be loaded with bed-clothes, but lightly covered; and the bed and body linen should be changed daily, if possible.

The bed-room should be capacious and well ventilated; fresh air frequently admitted; and if the season of the year permit, and there is no dampness of atmosphere, a window should be constantly open during the day: it is also desirable to keep the chamber darkened in all cases, as there is always a tendency to inflammation of the eyes.

If these directions are not regarded, and a great heat of the apartment is permitted, with abundance of bed-clothes heaped upon the child, the hot bath is used, and hot and stimulating regimen given (upon the old and erroneous notion of bringing out the eruption), the mildest case will inevitably be converted into one of the most severe and dangerous. Facts have abundantly shown that such measures invariably prove the most effectual means of exasperating the disease, and endangering life.

Regimen. — This must be most sparing. Cold water may be given whenever the child asks for it. Lemonade should form the common drink during the fever; and gruel, barley-water, and roasted apples are all else that is required during this period, and not until the disease is

going off must any change be made in the diet.

The above period having arrived, mildly nutritious food should be given, as chicken or mutton broth, beef-tea, arrow-root, tapioca, or sago; to be followed in a few days by the wing of a chicken or a mutton chop; remembering always, that solid animal food must at first be given cautiously and sparingly. Wine or stimulants must be positively forbidden; unless, indeed, ordered by the medical man, for circumstances may arise which render them advisable.

The state of the bowels must be carefully attended to at this time.

The Eruption. — In the natural and mild form of this disorder the pustules generally break from the sixth to the eighth day; dry scabs succeed; and in about nine or ten days the parts heal perfectly, requiring no treatment. In the more aggravated cases, however, in which the pustules are very numerous, running one into the other, and, bursting, discharge greatly, the whole surface of the body should be frequently and liberally dusted over with dried flour, or,

what is better, starch powder. The sores in this instance are always tedious in healing, and followed by the well-known pits or marks: these arise from a loss of substance in the true skin, and occur more particularly on the face, from the great vascularity of this part causing the pustules to be more numerous here than elsewhere. It is a popular error to suppose that by wearing masks of fine linen or cambric illined with particular ointments, these scars or pits may be prevented: it is impossible to prevent them; and any local application, except a little cold cream or oil of almonds applied to the scabs when they harden, will prove more injurious than useful. The child's hands, however, should always be muffled to prevent its scratching or breaking the sores, for otherwise he will not be kept from thus attempting to allay the excessive itching which they occasion.

The hair should be closely cut at an early period of the disease, and so kept throughout its continuance. This will contribute very much to the comfort of the child, by preventing the hair becoming matted together with the discharge from the pustules when they break, which gives

rise to great pain and irritation. In the confluent and worst forms of this disease, this measure it is particularly necessary to attend to, as also to the application of cold lotions to the head when hot and dry (with other remedial means), as there is always a tendency in these cases to the formation of abscesses, the healing of which is troublesome and attended with difficulty.

Cautions, &c. — It has already been stated that a *free ventilation* of the bed-room is necessary to the well-doing of the patient. This measure, however, must not be confined to the chamber of the sick, but acted upon through the whole house.

In conjunction with ventilation, *fumigations* by means of aromatic substances kept slowly burning should be resorted to. A solution of the chloride of lime too, a most powerful disinfectant, should be used to purify the different apartments. This is best accomplished by steeping in the solution pieces of linen, and hanging them about the rooms, as also frequently and freely sprinkling the walls themselves; and as soon as the invalid is removed, the chamber

should be white-washed, the various articles of furniture well scoured with soap and water, and the room be well and freely ventilated prior to its being again occupied.

The clothes of the patient and the bed linen should be frequently removed, and when taken away immediately immersed in boiling water, and whilst hung up in the open air sprinkled occasionally with a weak solution of the chloride of lime. If these directions are not observed, and the clothes are closely wrapped up, they will retain and give out the disease to others at a great distance of time.

Again: as the contagious property of small-pox hangs about the child as long as any scabs remain (which indeed may be said to retain the poison in its concentrated form), a parent must be most careful that the invalid is not too early brought in contact with the healthy members of the family.

An observance of these precautions is imperatively demanded; they not only protect the healthy, but aid the infected.

SECT. VIII. — HOOPING-COUGH.

My chief inducement to notice the above disorder arises out of the well-known fact, that there is no complaint of childhood more frequently subjected to quackery and mismanagement than is this. Indeed, there are few maladies against which a greater array and variety of means have been recommended, than against hooping-cough.

I suppose from the circumstance of the simple and mild form of the complaint being so tractable (provided it remain such) that the simplest and mildest measures effect its cure, parents are tempted to undertake its management in the more severe and complicated forms; and the result is but too often the establishment of disease dangerous to life, and sometimes fatal to it.

But although most imprudent for a parent to assume the office of the physician, her aid is essentially necessary in carrying out the measures prescribed. By her watchfulness and care

the duration of the disease may not only be abridged, but, what is of much greater importance, a more serious and aggravated form of disease prevented; for although hooping-cough in itself is not a dangerous disorder, still the most simple and slight case, if neglected or mismanaged, may quickly be converted into one both complicated and dangerous.

Description of the Disease. — Hooping-cough commences with the symptoms of a common cold, which is more or less frequent. These symptoms continue from five days to fifteen; at the end of which time the cough changes its character, and assumes the convulsive form, which distinguishes the disorder. It occurs in paroxysms, varying with the severity of the disease from five to six in the twenty-four hours to one every ten or fifteen minutes; being generally more severe and frequent during the night than in the day.

During a paroxysm the expirations are made with such violence, and repeated in such quick succession, that the child cannot breathe, and seems in danger of suffocation. The face and

neck become swollen and purple from suffusion; and the eyes prominent, injected, and full of tears. The little one, with a forewarning of the attack, which it dreads, falls on his knees, or clings closely to any thing near him. The paroxysm terminates with one or two long inspirations, attended with that peculiar noise, or "whoop," from which the disease has derived its designation.

Sometimes the fit of coughing is interrupted for a minute or two, so that a little rest is obtained; and is then succeeded by another fit of coughing and another hoop, until after a succession of these actions the paroxysm terminates by vomiting, or a discharge of mucus from the lungs, or both.

The disease having continued at its height for two or three weeks, it begins naturally to decline; the paroxysms become less frequent and violent; the expectoration increases; the cough loses its characteristic hoop, and gradually wears away altogether; until at length, in two or three months from the first onset of the disease, the child is restored to perfect health. Sometimes, however, particularly in the autumn,

and at other seasons on the occurrence of easterly winds, the paroxysms of cough will return, —it will assume its spasmodic character, and be accompanied with the "whoop," after a month, or even two or three months, of perfect and apparent recovery. Errors in diet will sometimes alone have a similar effect.

It is a disease which usually occurs during childhood, rarely affects the same individual twice, and is seldom seen in the very young infant.

In reference to the probable result of the disease, when it occurs in its mild and simple form in a healthy child, the termination is usually favourable; but it may at first assume this form, and afterwards become complicated, and consequently more or less dangerous, owing to injudicious management, or to various influences over which the mother has no control.

It generally appears as an epidemic, and at those seasons when catarrhal complaints are most prevalent, and affects many or several at the same time. Isolated cases, however, frequently occur, which seem to prove the disease to be infectious. Some persons deny that it is so. Mothers and nurses, however, who have

not had the disease, will often contract it from the child under such circumstances, and thus it will be quickly propagated through the family. The nursing mother will occasionally take it from the infant at her breast. The child who has caught it from others whilst at school, and brought home in consequence, will communicate it readily to his brothers and sisters, although the disease did not exist previously in the family or neighbourhood, and was brought from a distant part of the country. All these instances are surely proofs of its infectious character, and point out the necessity of caution whenever hooping-cough may present itself in a family, and the necessity which exists for an early removal of the unaffected children from the sphere of its contagious influence. The infectious property diminishes as the disease declines.

MATERNAL MANAGEMENT.—In the mild and simple form of this disease the medical treatment is one rather of prevention than cure, and the maternal management consists in assisting, by watchfulness and care, the fulfilment of this design.

In these slighter cases little more is required

of the mother during *the first stage* of the disorder (that is, before the cough becomes spasmodic) than attention to diet, regimen, and the excretions. The diet should be farinaceous, with milk, or as may be otherwise directed. The child must be confined to a mild equable temperature; in fact, to his apartment. It is a popular error to suppose that at this time change of air is beneficial to the disease: at a later period it certainly is so, but now injurious, and attended with great risk. Should the weather be cold, the little patient must be warmly clad, and flannel worn next the skin; this latter precaution should always be taken in the winter, spring, and autumn. Purgatives and other medicines will be required, and ordered by the medical attendant; the chief attention, however, of the parent must be directed to any change she may observe in the symptoms, breathing, &c.; she must be all on the alert to notice the first signs of local inflammation. Of this, however, we shall speak presently.

During the early part of *the second stage*, that is, when the cough becomes spasmodic, assuming its peculiar sound, the same diet and regimen

must be continued, and the same watchfulness observed, lest any inflammatory symptoms manifest themselves.

Under the foregoing treatment the disease generally runs its course without any untoward event, and the child recovers perfectly. Sometimes, however, although the patient is quite well, and the disease on the decline, the cough still continues. In these cases, and at this time, it is that change of air often proves so very serviceable. The sea-side is preferable, if the season of the year permit; and salt-water bathing, commencing with the warm or tepid bath, and passing gradually to the cold-bath (if no complication forbid it), will also prove certainly and rapidly remedial.

Crying, mental irritation, or opposition, frequently bring on a fit; and even the sight of another in a paroxysm will induce it in those affected by the disease. Running or other active exercise will generally cause the fits to be more severe. Young children, too, must be carefully watched at night, and be raised up by the nurse as soon as the fit is threatened. These hints the mother should bear in mind.

So much for the simple form of the disease, and that in which it most frequently and commonly presents itself to our notice: a mild disease; and, if carefully managed and watched over, certainly not a dangerous one.

Of what, then, is a parent to be afraid, or against what is she to guard? Lest other disease insidiously come on, and advance to an irremediable degree, masked by the cough, without attracting her attention. This is the great source of danger in hooping-cough. The physician, in a case of simple hooping-cough, is not in daily attendance upon his patient, and therefore not present to notice the commencement or first symptoms of those diseases which so frequently occur at this time, and the successful treatment of which will mainly depend upon their early detection, and the decision with which they are treated. When you hear of a child or several children in a family dying of hooping-cough, it is not this disease which proves fatal; but death is caused by some disease of lungs or brain, which has been superadded to the hooping-cough. The progress of hooping-cough, then, must be closely attended

to by the parent, even in the most favourable cases.

The most frequent complication with hooping-cough is *inflammation of the air-tubes* of the lungs. This is extremely frequent during spring and winter, especially in the months of February, March, and April, owing to the prevalence of easterly winds at this season. It is not my intention to detail the symptoms of this affection, only to point out those which will enable a parent to recognise its approach. A parent then may take warning, and fear the approach of mischief, when she observes the fits of coughing become more frequent and more distressing to the child, and the breathing hurried in the intervals of the paroxysm; when any exertion or speaking causes increased difficulty of breathing or panting; when the expectoration becomes less abundant, and difficult to get up; when there is no longer, or at all events less frequent, vomiting after the cough, and more or less febrile symptoms present.

If *the lungs* themselves are attacked by inflammation, most of the symptoms already pointed out will occur; the cough will be fre-

quent, in short paroxysms; the vomiting will not take place; the breathing will be very quick and hurried; and as the disease advances the hoop will cease.

If hooping-cough attack a child whilst teething, or from six months to two or three years of age, it is very common for the brain to suffer, and *convulsions* and *water on the head* to occur, particularly if the latter disease prevails in the family. Whenever the paroxysm of cough is increased in violence, the characteristic hoop disappearing, and the face becomes very livid; the hands clenched, and the thumbs drawn into the palms; the head hot, and marked fits of drowsiness and languor; and the child, during sleep, screaming out, or grinding its teeth,—something wrong about the head ought to be anticipated. Of the treatment we have here nothing to say, except that the gums must be carefully examined, and scarified if they require it, and the temperature of the head reduced by cold sponging, or the application of a bag of ice when necessary. The chief duty, however, of the parent is to be alive to these symptoms, and early to detect the incipient mischief, that by

a prompt application of efficient means the accession of so formidable a malady may be prevented.

To *specific remedies* for this disease it is scarcely necessary to allude, after what has been advanced, except by way of warning. In the simple form of the complaint such medicines are superfluous, or rather some of them, from their violent properties, most dangerous; in the complicated forms of the disease they are inadmissible.

The indiscriminate use of *purgatives*, also, a parent should avoid. Bowel affections are not an infrequent attendant upon hooping-cough, and always aggravate the primary disorder.

Of *external applications* all that need be said is this, that if they are not violently stimulating they do no harm; if, however, they contain tartar emetic, in addition to their doing no good to the disease, they cause unnecessary suffering to the patient, and are sometimes productive of dangerous and even fatal sores.

SECT. IX. — CROUP.

This disease is one of the most formidable of childhood; sudden (generally) in its attacks, most active in its progress, and if not met by a prompt and decided treatment, fatal in its termination. Hence the paramount importance of parents being acquainted with the signs which indicate its approach, that medical aid may be secured at the very onset of the disease. Upon this early application of suitable remedies every thing depends.

SIGNS OF ITS APPROACH. — Croup may appear in one of two ways: either preceded for two or three days by the symptoms of a common cold, accompanied with hoarseness and a rough cough; or it may attack with the most alarming suddenness, during the night for instance, although the child had been merry and well the previous evening.

Hoarseness, however, is the premonitory and important symptom of croup; for although it is

not every hoarseness that is followed by this formidable malady, still this symptom rarely attends a common cold in young children, and therefore always deserves when present the serious attention of the mother, particularly if accompanied by a rough cough.

The symptoms or signs of the approach of this disease have been ably and graphically depicted by the late Dr. Cheyne.

"In the approach of an attack of croup, which almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited; in variable spirits; more ready than usual to laugh or to cry; a little flushed; occasionally coughing, the sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep before the nature of the disease with which he is threatened is apparent; then, perhaps without awaking, he gives a very unusual cough, well known to any one who has witnessed an attack of the croup;

it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penètrates the walls and floors of the apartment, and startles the experienced mother — 'Oh, I am afraid our child is taking the croup!' She runs to the nursery, finds her child sleeping softly, and hopes she may be mistaken. But remaining to tend him, before long the ringing cough, a single cough, is repeated again and again. The patient is roused, and then a new symptom is remarked: the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough; the cough is succeeded by a sonorous inspiration, not unlike the kink in hooping-cough—a crowing noise, not so shrill, but similar to the sound emitted by a chicken in the pip (which in some parts of Scotland is called the roup, hence probably the word croup); the breathing, hitherto inaudible and natural, now becomes audible, and a little slower than common, as if the breath were forced through a narrow tube; and this is more remarkable as the disease advances," &c. &c.

It is unnecessary for me to add to the foregoing picture.

MATERNAL MANAGEMENT. — Having early obtained medical assistance attend with the strictest obedience to the directions given. And in this disease, more than any other, it is particularly important that the mother should give her personal superintendence; for the activity of the progress of the disease leaves no time to retrieve errors or atone for neglect. The practitioner may be prompt and decided in the measures he prescribes, but they will avail little, unless they are as promptly and decidedly acted upon.

The parent will have her reward; for, if timely aid has been afforded, and adequate means used, the event will be almost invariably favourable.

ITS PREVENTION. — Croup, when it has once attacked a child, is very liable to recur at any period before the thirteenth or fourteenth year of age. It may even do so several times, and after intervals of various duration. It is very

desirable, therefore, that a parent should be acquainted with the means of prevention.

They consist simply in the following measures:—The careful protection of the child from cold or damp weather, particularly the north-east winds of spring following heavy rains. Croup is most prevalent in those seasons which are cold and moist, or when the alternations of temperature are sudden and remarkable. If the residence of the child is favourable to the production of croup, (for instance, near a large body of water, or in low damp spots,) he should, if possible, be removed to a healthier situation. Sponging or the shower-bath, with cold water and bay-salt, with considerable friction in drying the body, should be commenced in summer, and employed every morning upon the child's rising from bed. The clothing should be warm in the winter and spring, the neck always covered, and flannel worn next the skin throughout the year; but hot rooms, and much clothing when in bed, must be avoided. The diet must be light and nourishing; no beer or stimulant given; and the state of the bowels must be carefully watched.

The above precautions are of course particularly necessary to enforce immediately after a recovery from an attack, for there is a great tendency to relapse. If the attack takes place during the winter or spring months, the invalid must be kept, until milder weather, in the house, and in a room of an equable and moderately warm temperature. If in the summer, change of air, as soon as it can be safely effected, will be found very useful.

SECT. X. — WATER IN THE HEAD.

Water in the head is a formidable disease, and not unfrequent in its occurrence. It is often destructive to life, and the instances are numerous in which it has appeared again and again in the same family, carrying off one child after another, as they have successively arrived at the same age.

But notwithstanding its frequency and fearful character, a mother may do much to overcome a constitutional predisposition to this disease,

and thus prevent its appearance; as also she may assist greatly in promoting its cure, when it does occur. Hence it is most important that a mother should be acquainted with the measures of prevention; and also, when it does manifest itself, that clear and accurate information should be possessed, upon what may be said to constitute the maternal management of the disorder.

Its Prevention. — Whenever there is found to exist in a family a predisposition to this malady, one or more children having suffered from it, a mother must make up her mind, and in the strictest sense of the word, to be the guardian of the health of any child she may subsequently give birth to. And not only during the period of infancy, but during that of childhood also, must she continue the same careful and vigilant superintendence.

The infant must be brought up on the breast, and if the mother is not of a decidedly healthy and robust constitution, she must obtain a wet-nurse possessing such qualifications. The breast-milk, and nothing beside, must form the nutriment of the child for at least nine months; and

if the infant is delicate or strumous, it will be prudent to continue it even six months longer. When the period arrives for the substitution of artificial food, it must be carefully selected; it must be appropriate to the advancing age of the child; nutritious and unirritating. Good air and daily exercise, and the bath or sponging, are of much importance; in short, all those general measures which have a tendency to promote and maintain the tone and general health of the system, and thus induce a vigorous and healthy constitution, and to which reference has been so fully made in the first chapter of this work, must be strictly regarded and followed out by the parent.

The condition of the digestive organs must be the mother's especial care. Costiveness must be guarded against; and if at any time the secretions from the bowels indicate the presence of derangement, the medical attendant must be applied to, that appropriate remedies may without delay be exhibited. Their disordered condition is frequently productive of head-disease. Again and again have I clearly traced the origin of the complaint, of which I am now writing, as

more immediately resulting from disorder of the digestive apparatus. To a child thus predisposed to water in the head, the healthy state of these organs is not only of first consequence, but any deviation from health to be dreaded, to be immediately attended to, and guarded against in future; and, as there is a great liability to these attacks at the time of weaning, the above remarks especially apply to that period, when due attention must be particularly paid to the plan of diet adopted.

During teething the mother must be especially watchful, for it is at this time that the disease so commonly appears; the irritation produced by this process being a frequent exciting cause. Every thing, therefore, that will tend to allay excitement of the system, must be strictly enforced, as well as all causes avoided, which would produce derangement of the stomach and bowels. The head should be kept cool. For this purpose it must be sponged night and morning throughout the whole period of teething; a horse-hair pillow used in the cot; and nothing but a light straw hat should be worn, except in winter. The diet should be

moderate, and carefully regulated after leaving the breast, and the child should be as much as possible in the open air. The mouth must be occasionally examined, and if the gums become hot or distended, they must be scarified or lanced, as may be advised. If the parent finds at any time an unusual heat about the head, the medical man must be at once consulted; or if there is watchfulness or indisposition to sleep at the proper periods, or frequent startings in the sleep, irritability of temper, and much crying, danger should be apprehended, and prompt and judicious means employed.

Eruptions about the head, or sores behind the ears, discharging more or less, will sometimes make their appearance just before the cutting of a tooth, and disappear after it is cut; or it will sometimes happen that, if not interfered with, they will continue throughout the whole period of dentition. Great caution should always be exercised in reference to these eruptions in all children; and when there is a predisposition to water in the head, it is dangerous to interfere with them at all, except they run to

such an extent as to become very troublesome. The sudden healing of these cutaneous affections has again and again been followed by head-disease. They are unsightly in the eyes of a parent, but it must be recollected that they render the situation of such children much more safe; and when teething is completed they will generally disappear spontaneously; or, if they should not, they will readily do so by proper medical treatment. I have no doubt that many a child's life has been saved by the appearance and continuance of these eruptions; and so sensible are medical men of the benefit derived from them, that in individuals in whom they do not appear, and in whose family there exists a predisposition to the disease now under our consideration, an issue or seton, in the arm or neck, has sometimes been made, and had a remarkable influence in warding off this affection. Dr. Cheyne refers to the circumstance of ten children in one family having died of this disease; the eleventh, for whom this measure was employed, having been preserved.

Stimulants, throughout the whole period of infancy and childhood, and of every descrip-

tion, must be prohibited. Children nursed by drunken parents, and who have indulged in the use of spirituous liquors during suckling, are never healthy; are the frequent subjects of convulsions, and many of them die eventually of water in the head. The practice of administering spirits to the child itself; a habit unfortunately not very uncommon among the lower classes; produces a similar result. Narcotics may operate in a like manner: they derange the whole system when persevered in, particularly affecting the brain; promote disease; and sometimes give rise to the one in question. This remark should be borne in mind by the mother, as Godfrey's Cordial and other preparations of opium are too often kept in the nursery, and secretly given by unprincipled nurses to quiet a restless and sick child.

All causes of mental excitement should be carefully avoided, and particularly the too early or excessive exercise of the intellectual faculties. If the child be endowed with a precocious intellect, the parent must restrain rather than encourage its exercise. Nothing is more likely to light up this disease in a constitution predis-

posed to it, than a premature exertion of the brain itself.

MATERNAL MANAGEMENT OF THE DISEASE. — The early detection of this disease is of great importance. The chances that the medical treatment will terminate successfully much depend upon the early and prompt application of remedial means. The reason why these cases have so often terminated fatally has arisen from the physician being consulted when irremediable mischief had already taken place. It would be difficult, however, to point out the signs of its approach in all its forms (for this disease does not always commence in the same way, sometimes with fever, &c.), still it most frequently occurs preceded by certain striking and well-marked symptoms; and whenever the following are noticed by the parent apprehensive of mischief, she should at once send for her medical adviser: — watchfulness, or starting from sleep with a cry of alarm; prolonged screaming without any obvious cause; moaning and drowsiness; rolling the head from side to side on the nurse's arm, or thrusting it back against the

pillow; knitting the brows and aversion from light, with heat of head, and constant carrying the little hand up to it; half closing the eyelids, and frequent vomiting.

The chief and principal point in the maternal management (for it includes every other) is promptly and faithfully to administer the remedies prescribed by the medical attendant. A vigilant maternal superintendence is more necessary in this than almost any other disease; and it is highly desirable, therefore, that the mother should have a day and night nurse — individuals upon whom she can depend. A careful notice of symptoms and changes in the patient, in the intervals of the medical man's visits, and a true and faithful report to him upon his return, are of essential importance. A sleepy nurse will neglect the application of the most important remedies, and necessarily give an unfaithful report of symptoms; hours the most valuable to the child's well-doing are thus lost, and the chances of saving its life worse than problematical.

The temperature of the room should be kept rather cool than warm, and the bed-clothes

only sufficient to preserve the natural heat of the body. Strong light must be excluded. Great quiet should be observed. Freedom from all excitement of the senses, and irritation of the temper, should be carefully avoided: this is particularly necessary where the child is naturally of a quick and sensitive disposition.

All the excretions must be put aside for the inspection of the physician, but not kept in the sick chamber, which must be well aired, and perfectly free from closeness. The regimen must be only such as is ordered, and any departure therefrom will be attended with mischievous consequences. During the early periods of the disease, all that is required are cooling diluents, given frequently, and in small quantities at a time; and upon approaching convalescence great carefulness must be paid to the amount of nourishment allowed, lest the disease be rekindled: strict compliance, therefore, to medical directions must be given.

A very useful and indeed powerful remedy prescribed in this disease, is sometimes rendered utterly useless from a want of a persevering and also proper mode of applying it, viz. cold appli-

cations to the head. It is to be effected either by means of cloths kept constantly wet with cold water, or evaporating lotions; or by means of a bladder containing pounded ice mixed with water. If the two former are employed they require frequent renewal, or they become dry, hot, and more injurious than useful; and whichever is used, it must be kept in constant contact with the forehead, temples, and upper part of the head. Here is another error; they are seldom used large enough, and only partially cover these parts. With the further view of keeping the head cool, and preventing the accumulation of heat, a flat horse-hair pillow should be employed, and the head and shoulders somewhat raised.

Perseverance in the measures prescribed, even when the case appears beyond all hope, must ever be the rule of conduct. Recovery, even in the most advanced periods of the disease, in cases apparently desperate, occasionally takes place. There is great reason to fear that many a child has been lost from a want of proper energy and perseverance on the part of the attendants in the sick room. They fancy the

case is hopeless, and, to use their own expression, "they will not torment the child with medicine or remedies any longer."

"Whilst there is life, there is hope," is a sentiment which may with great truth be applied to all the diseases of infancy and childhood. Striking, indeed, are the recoveries which occasionally present themselves to the notice of medical men; and those individuals may with great justice be charged with unpardonable neglect who do not persevere in the employment of the remedies prescribed, even up to the last hours of the child's existence.

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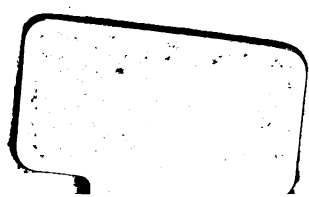
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